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for men and women



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GENERAL STATEMENT

NEW HAVEN COLLEGE, 1957-58

New Haven College



Objectives of the College

New Haven College is an independent community college operating in Yale University as a non-profit, non-sectarian, and co-educational institution. As a community college, the College serves the educational needs of the New Haven-Southern Connecticut area.

The primary objective of the College has been, traditionally since its organization in 1920, to give educational training particularly in those fields of engineering and business which best accommodate the training needs of employees and potential employees in this community.

The ultimate objective of New Haven College is to help the student realize his vocational aims, and also to help him, through a program of guidance and general education, in achieving broader understanding and appreciation of life.

Historical Landmarks: 1920-1956

1920—Organized as branch of Northeastern University. Stimulated by the needs and demands of returning veterans of World War I.

1926—Incorporated as an independent college by act of the Connecticut Legislature. Established relations with Yale University whereby the University provided facilities as a contribution to the improved work of this new community institution.

1930—Movement toward planned “programs” for employed adults and away from the previous practice of offering a scattering of relatively unrelated courses. This movement, which held significant emphasis in the continuing progress of the institution, was stimulated by Ellis C. Maxcy, Director of the College from 1930 to 1937.

1938—Planned cooperation with business and industry, proved through a two-year program of experimentation, led to the appointment by companies of our 300 coordinators to act as counselors and liaison officers between the company, the College and the student-employee. From this movement toward closer cooperation the *Work-Study Program* of the College was born.

1941—The Engineering, Science, and Management War Training Program, organized through federal sponsorship and financing as an aid to war industry. This was an official program of Yale University, administered in New Haven County by the College. Experience in this program revealed new areas of long-term service to this industrial community that should continue to be served by the community college and brought about an expanded curriculum in the regular college program.

1944—The enrollment of the first veteran of World War II.

The development of five-year Employee Training Agreements with companies which enabled the College through new and improved relations with business to adapt its programs to the post-war needs of the community. Funds from the Agreements brought new and increased leadership,

new direct services to cooperating companies, and new programs of study to fit post-war needs of the community.

1948—Approved by the New England Association of Colleges and Secondary Schools.

1949—Announcement of the *Cooperative Program of Education*—alternating full-time study and full-time work by quarters. This plan, originated by the University of Cincinnati in 1906, was a natural outgrowth in New Haven of thirty years' experience in cooperation between the College, business, and industry of the community.

1952—First class in the School of Executive Development (SED), a four-year program for middle-level executives for the development of additional breadth and understanding aside from specialization. The program is under the guidance of a group of senior executives of New Haven business and industry, which further exemplifies the cooperation between the College and industry in meeting both present and future needs.

1956—A program to develop engineering aides for Olin Mathieson Chemical Corporation. Entirely company financed, the three-year program will utilize the knowledge and skill of present employees as the best means of providing the New Haven operations with much needed engineering aides.

Relations With Yale University

The relationship of New Haven College with Yale University can best be expressed by the following excerpt from the Yale University Catalogue:

No extension or evening classes are offered by Yale University either in termtime or during the summer.

Individuals interested in late afternoon or evening work are referred to New Haven College, an independent community institution chartered by the Connecticut legislature, which is operated in ten buildings contributed by Yale without charge as a part of its service to the community.

Divisions of the College

New Haven College has three divisions: The New Haven YMCA Junior College, which is the legally chartered degree-granting division; The Division of Special Studies; and The School of Executive Development.

The New Haven YMCA Junior College

The Junior College offers three credit programs: The Evening Credit Program, The Daytime Cooperative Program, and the Production Engineering Program.

The Evening Credit Program offers Associate in Science degrees in Accounting, Business Administration, General Studies, Management, Electrical Engineering, General Engineering, Industrial Engineering, Mechanical Engineering, and Metallurgical Engineering.

The Daytime Cooperative Program, intended for recent high school graduates, alternates full-time studies with positions procured by the College in business and industry. Students may earn the Associate in Science degree.

The Joint College-Industry Production Engineering Program, an example of industrial and educational cooperation, is a program of study under which qualified employees of a company or group of companies study under a three-year program in the field of production engineering. Late afternoon classes combined with in-plant training are designed to utilize the knowledge and skill of present employees as the best means of providing the industries of this region with much needed engineering aides.

The Division of Special Studies

This division offers special courses, usually of a non-credit nature, in engineering, business, and general areas. These special courses are intended as more immediate aids to specialized jobs in business and industry. Courses are generally scheduled in the evening. (For further information refer to index and request separate bulletins.)

The School of Executive Development

This four-year program for middle-level executives consists of advanced management studies with emphasis placed on the development of additional breadth and understanding aside from specialization. The school is guided by a group of senior executives of New Haven business and industry, and the enrollment is limited to individuals designated by their respective companies and approved by the College. The program operates in the late afternoon hours. (See index and request separate bulletin for further information.)

Coordinated Course Offerings

New Haven College

Quinnipiac College

In order to broaden the educational opportunities available to students, New Haven College and Quinnipiac College have entered into a reciprocal agreement through which students at either college may elect certain courses at the other subject to the approval of the Dean.

Credit, grades, and quality points earned in courses covered by this agreement will be officially recorded at New Haven College.

For information concerning these coordinated course offerings, consult the Dean.

**THE NEW HAVEN
YMCA JUNIOR COLLEGE**

*Which grants the degree
Associate in Science*

General Information

NEW HAVEN COLLEGE, 1957-58

New Haven YMCA Junior College



New Haven YMCA Junior College is the fully accredited, degree granting division of New Haven College. The Associate in Science degree may be earned through the successful completion of all graduation requirements in any of the three programs of study which make up the Junior College.

The Credit Programs of the Junior College

The offerings of New Haven YMCA Junior College, which lead to the Associate in Science degree, fall into three major programs:

The Evening Credit Program, which offers the Associate in Science in:

Accounting	General Engineering
Business Administration	Industrial Engineering
General Studies	Mechanical Engineering
Management	Metallurgical Engineering
Electrical Engineering	

The Daytime Cooperative Program, in which a student may earn the Associate in Science degree and in so doing may elect a limited number of courses from the fields of business, engineering, management and general studies.

The Joint College-Industry Production Engineering Program, a company sponsored program of sixty semester hours operating in the late afternoons, in which the employee-student is trained by both classroom study and in-plant training in the field of production engineering.

Accreditations and Memberships

New Haven YMCA Junior College is a co-educational, non-sectarian, independent institution of higher learning chartered by the Legislature of the State of Connecticut, accredited by the Connecticut State Department of Education and holding membership in the American Association of Junior Colleges, the Association of YMCA Schools and Colleges, the Connecticut Conference of Junior Colleges, the New England Junior College Council, the Connecticut Council on Higher Education, and the New England Association of Colleges and Secondary Schools.

Transferability of Credit

In accordance with the usual practice among institutions of higher learning, transfer of credit from this College to another institution will be determined by the other institution in terms of the achievement and promise of the individual seeking transfer. The institution to which transfer is being made will also evaluate specific courses in terms of their length and content in relation to its specific requirements. New Haven YMCA Junior College is an accredited institution and its credits will be given consideration by the major institutions of the country in terms of the conditions outlined above.

Student Personnel Services

In the interest of assisting each student to achieve his fullest development as a personality and of helping him to utilize most effectively the instruction offered, the College makes available to all students a variety of services which are his for the asking.

These services include:

- Counseling and Guidance
- Testing
- Job Placement (see index)
- Loans and Scholarships
- Student Activities

Counseling and Guidance — Members of the administrative staff of the College reserve many hours for counseling with students. Students need only to request an appointment in order to seek information and help. By inquiring at the office, a student may learn who is most qualified to discuss his problem with him. Counseling and guidance is offered in such areas as program planning; study habits and methods; personal, marital or domestic problems; vocational selection and choice; job adjustment; relationship with Veterans Administration, the military establishments and Selective Service; and others.

Testing — Counselors, upon request, will report and interpret to students the results of their entrance tests.

The Director of Student Personnel, as a professional vocational counselor, is prepared to undertake vocational testing and counseling with students requesting this service.

Tuition Loan Fund — Gifts to the College have made possible a revolving loan fund which is administered in accordance with the policies established by the Board of Governors.

The purpose of this fund is to assist students to meet tuition costs by means of a loan of not more than fifty percent of their tuition for any one semester. No interest charge is made for this loan. Applications for assistance should be made to the Director of the College.

Scholarships and Grants-in-Aid — A limited number of scholarships and grants-in-aid, amounting to approximately one-half of the tuition, are available each year. These are awarded by the Scholarship Committee on the basis of scholastic record, ability to profit from the program and financial need. To be eligible for a scholarship, a student is expected to have a Quality Point Ratio of 3.0 for work taken at this College. Scholastic requirements to qualify for a grant-in-aid are a Quality Point Ratio of 2.0. Application forms may be secured from the College office.

The Industrial Management Club of New Haven makes available scholarships to students attending the New Haven YMCA Junior College. These scholarships are administered by the Education Committee of the Industrial Management Club under the policies established by the Club.

The Alumni Association makes scholarship grants to undergraduates as well as to outstanding members of each graduating class.

The New Haven Chapter of the American Society of Tool Engineers provides an annual scholarship to a student in mechanical engineering.

All scholarships are administered by the Scholarship Committee of the College. Applications may be obtained at the College office.

Student Council — A student Council of ten members is elected annually by the student body. The Council bears the responsibility for initiating, organizing and carrying through extra-curricular activities and of performing liaison functions between students and the college staff. The major work of the Council is performed through its Student-Faculty Relations Committee and Social Committee.

The Engineering Society — The Engineering Society of the College is chartered as a student chapter of the American Association of Engineers which has as its aims "to promote the social and economic welfare of engineers, to stimulate public service in the profession, to encourage and develop the efficiency of the engineer, and to promote unity in the profession."

The activities of the society include lectures, discussions and field trips designed to stimulate interest in the field of engineering and to supplement formal study.

Full membership is open to engineering graduates, and to undergraduates who have completed second year engineering mathematics. Students who are fully matriculated as freshmen in engineering may hold associate membership.

Athletic Activities — Under the leadership of the Student Council and the sponsorship of a member of the College staff, intramural competition is organized in basketball, bowling, golf and tennis.

The college basketball team, under the tutelage of the coach, competes in one of the leagues of the New Haven Y.M.C.A.

Y.M.C.A. Privileges — Each male student enrolled in the College is granted free use of the facilities of the New Haven Y.M.C.A. during his period of enrollment. He may participate in group sports conducted there under the supervision of a member of the College staff, or he may individually use the privileges at times convenient to him.

Each student who wishes to use the Y.M.C.A. must obtain an identification card at the College office each semester and present it at the Y.M.C.A. After satisfying the physical examination requirements he may continue to take advantage of his privileges during each period of enrollment in the College.

Student Newspaper — *The News* is the newspaper edited and published by the student group. Any student may volunteer his services on the newspaper staff.

Policy Board of the News — The Board is charged with the responsibility of electing the editor and associate editor of *The News*; of establishing,

defining and executing policies relating to the purpose, function, coverage, circulation and the selection of articles for publication.

Membership on the board consists of three members of *The News* staff, two members of the Student Council and the faculty advisor of each of the two groups.

Social Activities — The *Open House* and *Orientation Assembly* at the opening of each semester provides an occasion for the induction of new students into the life of the College. Addresses by members of the College staff are followed by a program of entertainment and by exhibitions of physical activities of the Y.M.C.A.

Guest Night — Students and faculty invite wives, husbands or friends to attend classes with them at the College and entertain them informally following class visits.

Dances — Three or four dances, informal and semi-formal, are held annually for the entire student body.

Other Social Activities include those sponsored by the various student organizations among which are the senior banquet; meetings of the Student Council with the Board of Governors and the Faculty Advisory Committee; parties held by the *News* staff, the professional societies and the students enrolled in the Cooperative Program; and the Alumni reception for members of the graduating class following commencement.

Veterans

New Haven College is approved by the Veterans Administration for the education of veterans under Public Law 550 (Korean G.I. Bill).

In view of the fact that the full evening program of the College is approximately a half-time program, veterans attending evening classes have approximately twice the time for education for which they are eligible in a full-time program. Those enrolled in a full-time program naturally will be using their eligibility at the full rate.

Change of Program — Veterans Administration regulations do not permit the College to authorize a change of program for a veteran. Changes must be authorized by the Veterans Administration.

Counseling — Although the Director of Student Personnel is the official designated to handle veteran's problems, each member of the administrative staff is available and prepared to discuss problems with veterans. Appointments may be made at the office of the College.

Alumni Association

The Alumni Association plays an active role in the life of the College. Monthly meetings of the executive committee are held. During the course of a year the Association holds several general business, social and educational meetings.

The Association elects a representative to the Board of Governors of the College. It awards scholarships to deserving students and prizes to outstanding members of each graduating class. During the commencement season it is host to the graduating class at a reception for graduates and their families at the close of commencement exercises.

Scholastic Regulations

Grading System — The following grading system is in use, and except where otherwise specified, applies both to examinations and to term work. The weight of a final examination grade is a matter individually determined by each instructor.

- A Superior
- B Good
- C Fair
- D Lowest passing grade
- F Failure

Inc. Incomplete. This grade is used to indicate that a student, who has otherwise done satisfactory work, has been unable, due to extenuating circumstances, to complete work, other than a final examination, which can be made up. In order to remove the "incomplete," such work must be made up before the first day of the following semester. Otherwise the "Inc." remains on the record, no credit is given for the course and it must be repeated before further work for which it is prerequisite may be taken.

Wd. Withdrawal. This grade indicates: (1) that the student withdrew prior to the midpoint of the semester, or (2) that the student withdrew after the midpoint of the semester, and that his work was satisfactory at that time.

WF This grade indicates withdrawal after midpoint in the semester with unsatisfactory work.

X This grade indicates absence from the final examination although term work is passing. When extenuating circumstances have prevented a student from taking a final examination, it must be made up before the first day of the next semester upon request and upon payment of the fee for make-up examination. If the make-up examination is not taken at the appropriate time the "X" remains on the record, no credit is given for the course, and it must be repeated before further work for which it is prerequisite may be taken.

S Satisfactory. Given only in non-credit required Coop courses.

U Unsatisfactory. Given only in non-credit required Coop courses.

Grade Reports — Reports of the final grade in each subject will be mailed to the student soon after the close of each semester. The same report will be mailed to employers in those instances where the student has given his approval.

Placement on Academic Probation — The academic standing of each student will be determined on the basis of his quality point ratio each semester.

The quality point ratios required to be in good academic standing are as follows:

During the first and second semester of enrollment in the College, a quality point ratio of 1.5 is required.

After the student is enrolled in the third semester, a quality point ratio of 1.6 is required.

Failure to earn the required quality point ratio in any semester will place a student on academic probation for the following semester of enrollment.

Attention is called to the fact that the minimum quality point ratio of 1.6 which is required to remain in good academic standing from semester to semester is insufficient to meet the graduation requirement of a total quality point ratio of 2.0. Therefore, the fact that a student may never have been on probation is no guarantee that he will meet graduation requirements.

In order to determine quality point ratios, each letter grade is assigned a quality point value:

A	4 quality points
B	3 quality points
C	2 quality points
D	1 quality point
F	0 quality points
WF	0 quality points

The quality point ratio for Evening Credit students will be obtained by dividing the total quality points each semester by the number of class sessions per week carried during the semester.

In the Joint College-Industry Production Engineering Program, the quality point ratio is determined as above.

The quality point ratio for Cooperative students will be obtained by multiplying the quality point value of each grade by the number of semester hours of the course, then dividing the total quality points by the total semester hours.

Removal of Probation or Dismissal for Academic Deficiency—

1. A student who has been placed on probation and who does not earn the required quality point ratio in the next semester will be dismissed from the division of the College in which he is enrolled.

2. A student who has twice been on probation will be dismissed from the division of the College in which he is enrolled the next time his quality point ratio for any semester falls below the required minimum.

3. A student whose quality point ratio in any one semester is less than 1.0 will be dismissed from the College.

Readmission — Applications for readmission to this College after a student has been dismissed, and application for admission to this College following dismissal from another college, will be considered only after the lapse of a semester and only when the student provides evidence which indicates his probable success if readmitted.

Requests for readmission should be submitted in writing to the Dean at least three weeks before the opening of the semester and should include evidence supporting the student's belief that he may succeed if readmitted.

Readmission does not automatically follow; each application is decided individually.

Placement on Honors List — Students who earn a quality point ratio of 3.6, or better, in any one semester will be placed on the Honors List for that semester. Determination of the quality point ratio is made in the same manner as is described for placement on probation.

Attendance Regulations

The College does not recognize excused absences and such a thing as a "free cut" does not exist. Classes are operated on the policy that it is necessary for all students to attend all class meetings. If a class is missed, the benefits from participation in the class discussion and instruction are completely lost. No student, regardless of ability, can afford that loss.

However, it is recognized that illness, unforeseen job commitments and other reasons beyond the control of the student will make it impossible for every student to attend every class meeting. Therefore, the following regulations are in effect:

Evening Credit Program Regulations — A student is automatically dropped from each course when his absences total *four* in a course meeting once a week, and when his absences total *seven* in a course meeting twice a week.

Cooperative Program — A student is automatically dropped when his absences reach the number indicated below:

<i>In courses meeting</i>	<i>During 8-week period</i>	<i>During 12-week period</i>
Once per week	2	3
Twice per week	4	5
Three times per week	5	7
Four times per week	6	10

When a student is dropped, his instructor and the VA (when applicable) will be notified.

After being dropped, the student may apply to a member of the Committee on Academic Standing for reinstatement, the responsibility for application being entirely the student's. The application must be immediate. Consideration of reinstatement will be given in exceptional cases, but for the majority reinstatement will not be granted.

Requirements for the Degree

The Associate in Science degree will be conferred at Commencement when the student has met *all* of the following requirements:

1. Has completed all the course requirements outlined in one of the programs leading to the degree;
2. Has earned a cumulative quality point ratio of at least 2.0;
3. Has been recommended by the faculty;
4. Has met all financial obligations.

Degree With Honors —

A degree with honors is awarded to students who have a quality point ratio of 3.33 for the semester hours specifically required for the degree program from which they are being graduated, and who have taken all the required work at this College.

Transfer students will be awarded honors on the same basis, provided however, that their total average will be considered only when they have an honor average for studies completed at this College.

Degree With High Honors —

A degree with high honors is awarded to students who have a quality point ratio of 3.6 based on the same considerations as noted above.

In determining eligibility for degrees with honors, credits earned by crediting examinations and electives in excess of those required will not be considered.

Transfer Students —

Students who have been granted advanced standing for credits earned at another college are required to earn a minimum of eighteen semester hours at New Haven College, twelve of which must be in their major field of study.

NEW HAVEN YMCA JUNIOR COLLEGE

Faculty, 1956-57

ANDERSON, FRANK W. B.S., Wilkes College Sales, J. T. Ryerson & Son, Inc.	<i>English</i>
BECKER, EDWARD ROY B.A., University of Pennsylvania Yale University Law School	<i>Economics</i>
BERNEY, CHARLOTTE B.A., Wellesley College; M.A., University of Michigan	<i>English</i>
BOOTH, C. E. Ph.B., Yale University Consulting Engineer	<i>Physics</i>
BOWDEN, CARLETON L. B.E., Yale University Process Engineer, Pratt & Whitney Aircraft	<i>Mathematics and Mechanics</i>
BOYD, ROGER W. B.S., Yale University Power Engineer, United Illuminating Company	<i>Engineering Drawing</i>
BRAND, MADELINE A. A.B., University of Toronto M.A., Columbia University	<i>English</i>
BRONSON, GEORGE D. Account Executive, WNHC-TV	<i>Sales Promotion</i>
BURSTEN, BEN B.S., University of Vermont; M.A., University of Connecticut Yale University—Medical School	<i>Psychology</i>
CARRINGTON, FRANKLYN H. A.S., New Haven College; C.P.A., State of Connecticut F. H. Carrington and Company	<i>Accounting</i>
CHRISTIAN, RENA G. B.A., M.A., University of Wisconsin King's College, London	<i>English</i>
CONKLING, GEORGE J. A.S., New Haven College Deputy Commissioner, Finance and Control, State of Connecticut	<i>Accounting</i>
COTJANLE, THEODORE E. B.A., University of Connecticut Advertising Assistant, United Illuminating Company	<i>Advertising and Sales Promotion</i>

- CULL, THOMAS F. *Statistical Quality Control*
 B.S., Yale University *Mathematics*
 Systems Engineer, Univac Division, Sperry Rand Corporation
- DELGROSSO, EUGENE *Metallurgical Engineering*
 B.S., Yale University; M.S., Pennsylvania University
 Metallurgist, Chase Brass & Copper Co.
- DEW-HUGHES, DAVID *Engineering Materials*
 B.Sc., Birmingham University, England
 Assistant in Research Metallurgy, Yale University
- DOBBINS, RICHARD C. *Supervision and Management Labor Relations*
 A.S., New Haven College; B.S., University of Bridgeport
 Division Training Director, American Brass Company
- DOWNING VINCENT *English*
 B.A., St. John's University
 Yale University Law School
- DUDLEY, EDWIN A. *Mathematics*
 B.A., Wesleyan University; M.A., Yale University
 Instructor of Mathematics, North Haven High School
- FISCHER, FREDERICK F. *Accounting*
 B.C.A., Northeastern University
 Certified Public Accountant, Connecticut
 Member and Secretary, State Board of Accountancy; Secretary, State
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 B.S. in Economics, University of Pennsylvania
 Certified Public Accountant, Connecticut
 Partner in Baker, Goodyear and Company
- FISCHER, LEWIS C. *Accounting*
 B.S., University of Pennsylvania
 Baker, Goodyear & Co.
- FURBUSH, ALLEN A. *Physical Education*
 B.S., University of New Hampshire
 Associate Physical Director, New Haven Y.M.C.A.
- GANGLER, JOSEPH M. *Mathematics*
 B.S., University of Washington; M.A., Teachers College, Columbia Uni-
 versity
 Instructor of Mathematics, New Haven State Teachers College
- GHOUREYEB, JOHN W. *Personnel Administration*
 B.A., Yale University; M.A., Columbia University
 Employee Relations, The United Illuminating Company

- GIBBS, ALFRED *Mathematics*
A.S., New Haven College
Engineer, Bradley Laboratories, Inc.
- GIBSON, JOHN E. *Supervisor of Electrical Engineer Program*
B.S., University of Rhode Island; Ph.D., Yale University
Assistant Professor of Electrical Engineering, Yale University
- GOODBAR, ISAAC *Mathematics*
B.S., Universidad de Buenos Aires; S.M., Massachusetts Institute of Technology
Engineer, New Haven Clock and Watch Company
- HEALEY, ARTHUR H. *Law*
B.A., Trinity College; L.L.B., Harvard Law School
Attorney at Law
- HEATH, JOHN M. *Mathematics*
B.A., Wesleyan University; M.A., Yale University
Head of Mathematics Department, Hopkins Grammar School
- HEAVENS, JOHN E. *Introduction to Design, Advanced Tool Design*
Manager, Star Pin Company
- HEIDBREDER, GLENN R. *Electrical Engineering*
B.E., Mechanical Engineering, Yale University
Electrical Engineering, Yale University
- HESTON, GEORGE W. *Supervision*
B.A., Yale University
Employee Relations, United Illuminating Co.
- HIGH, THEODORE K. *Survey of Business and Industry*
B.A., Indiana University; M.A., University of Cincinnati
Law School, Yale University
- HUNT, LEIGH W. *Engineering Drawing*
Assistant Chief Draftsman, MB Manufacturing Co.
- IACCARINO, CARL J. *Mathematics*
A.S., New Haven College
Development and Standards Engineer, J-B-T Instruments, Inc.
- JOHANNSEN, COURTLAND E. *Engineering Drawing*
B.A., M.A., University of Iowa
Advanced Study, Yale University
Lighting Specialist, United Illuminating Company
- KOSSACK, CARL R. *Mathematics*
B.S., M.A., Yale University
Assistant Professor of Mathematics, New Haven State Teachers College

- KUSLAN, LOUIS I. *Modern Science*
B.S., University of Connecticut; M.A., Yale University
Ph.D., Yale University
Assistant Professor of Science, New Haven State Teachers College
- LANGEWISCH, PAUL *Physics*
B.S. in E.E., Bucknell University
Assistant in Electrical Engineering, United Illuminating Company
- LAWTON, ERNEST B. *Conference Leadership*
B.A., Columbia University
Director (Retired), Personnel and Training, Chase Brass & Copper Co.
- LEARY, JOHN L. *Speech*
B.A., Fordham University
Law School, Yale University
- LEVY, IRWIN A. *Economics*
A.B., University of Pennsylvania
Law School, Yale University
- LEWIS, MARVIN B. *Mathematics*
B.S., Illinois Institute of Technology
Ph.D., Northwestern University
Instructor, Physics, Yale University
- LONG, WILLIAM G. *Political Science*
B.A., M.A., University of West Virginia
Yale Divinity School
- MARTIN, EVERETT W. *Industrial Safety, Speech*
B.S., Harvard University
Director of Educational Projects, Liberty Mutual Insurance Company
- MCDONALD, RICHARD A. *Electrical Engineering*
B.E., Yale University
Electrical Engineering, Yale University
- MCGREGOR, ROBERT M. *Industrial Organization and Management*
B.A., University of Maine
Assistant Production Manager, J-B-T Instruments, Inc.
- MELVIN, DONALD W. *Electrical Engineering*
M.S., University of New Hampshire
Electrical Engineering, Yale University
- MICHAELS, KENNETH G. *Mathematics*
B.S. Ed., Teachers College of Connecticut, New Britain
Mathematics Instructor, North Haven High School
- MILLER, CLARK L. *English*
B.A., State University of Iowa
Yale Divinity School

- NOWAK, GEORGE J. *Accounting*
 B.S., American International College; M.B.A., Wharton School of
 Finance and Commerce; Certified Public Accountant
 George Nowak and Co., C.P.A.
- ORLANDO, ROCCO *Mathematics*
 B.A., University of Connecticut; B.S., New Haven State Teachers
 College
 Instructor, Amity Regional High School
- PECORARO, CHARLES J. *Machine Design*
 A.S., New Haven College
 Process Engineer, Olin Mathieson Chemical Corporation
- PHELPS, ERNEST D. *Economics*
 B.A., Acadia University; M.S., Kansas State College
 Training Director, Olin Mathieson Chemical Corporation
- RASIEL, AMRAM *Electrical Engineering*
 B.Sc., Haifa College of Technology; M.E., Yale University
 Graduate Assistant, Yale University
- REECE, NORVAL D. *Basketball Coach*
 B.A., DePauw University
 Yale Divinity School
- REID, RICHARD *Industrial Organization and Management*
 B.S., Ursinas College
 Sales Management, Seamless Rubber Company
- REITER, STANLEY F. *Metallurgical Engineering*
 B.M.E., Connell University; M.E., D.Eng., Yale University
 Technical Manager, Rome Fastener Corporation
- RIELLO, ACHILLE *Speech*
 B.S., Emerson College; M.A., New York University
 Speech Correctionist and Hearing Therapist, New Haven Board of
 Education
- RODDY, FRANK M. *Management and Labor Relations*
 B.A., Boston College
 Labor Supervisor, The American Brass Company, Ansonia Branch
- ROGOVIN, GERALD A. *English*
 B.S., University of Maine; M.S., Columbia University
 Assistant Executive Director, Tuberculosis and Health Association of
 New Haven Area, Inc.
- RUCHKIN, DANIEL S. *Electrical Engineering*
 B.E., Yale University
 Electrical Engineering, Yale University

- SANDOMIRSKY, ALEXANDER G. *Introduction to Design, Thermodynamics*
B.S., M.A., Cambridge University
Chief Engineer, B. F. Goodrich Sponge Products Division
- SANFORD, JOHN F. *Electrical Engineering*
B.E., Yale University
- SARASON, BERTRAM D. *English, Speech*
B.S., M.A., Ph.D., New York University
Professor of English, New Haven State Teachers College
- SCHURR, GEORGE M. *Philosophy*
B.S., University of Redlands; B.D., Garrett Biblical Institute, North-
western University
Pastor, Park Methodist Church, Branford
- SEAMAN, AYRES C. *Strength of Materials, Engineering Drawing*
B.S., C.E., Swarthmore College
Structural Engineer, Westcott and Mapes
- SHEWBRIDGE, WILLIAM H. *Methods Engineering*
S.B., Massachusetts Institute of Technology
Chief Time Study Engineer, Scovill Manufacturing Company
- SMITH, WILLIAM R., JR. *Psychology*
B.A., Marietta College
Senior Technical Assistant, Operations Research, Naugatuck Chemical
Division of U. S. Rubber Company
- SCHNEIDER, CARL G. *Physics*
B.M.E., Villanova University
Bellows Engineer, Bridgeport Thermostat Division, Robertshaw Fuller
Controls Company
- SNYDER, CHARLES R. *Sociology*
B.A., M.A., Ph.D., Yale University
Research Assistant and Instructor, Center of Alcoholic Studies, Yale
University
- STEIGERT, FREDERICK E. *Lecturer, Physics Laboratory*
B.S., Union College; M.S., Ph.D., Indiana University
Assistant Professor, Physics, Yale University
- STONE, HARRIS D. *Engineering Drawing*
A.B., Brown University
- SUCHY, ANTHONY J. *Office Organization and Management*
A.S., New Haven College
Comptroller, Connecticut Blue Cross
- SULLIVAN, JOHN T. *English*
B.A., University of Notre Dame
Law School, Yale University

- TIERNAN, GEORGE R. *Law*
 B.A., Yale University; L.L.B., Cornell University
 Attorney-at-Law, Prosecuting Attorney of Court of Common Pleas
- TUTEUR, FRANZ B. *A.C. Circuits, E.M. Circuits*
 B.S. in E.E., University of Colorado; M.Eng., Ph.D., Yale University
 Assistant Professor, Electrical Engineering Department, Yale University
- UNDERWOOD, DALE S. *Literature*
 B.A., University of Kansas; M.A., Ph.D., Yale University
 Assistant Professor of English, Yale University
- VAN HAAGEN, WALDEN *Principles of Selling*
 Manager of Commercial Marketing, Atlantic Refining Co.
- WARNER, WILLIAM L. *Methods Engineering*
 B.S., Colby College
 Time Study Engineer, Scovill Manufacturing Company
- WARNER, THOMAS C., JR. *Mathematics*
 B.E., Yale University; Sc.M., Massachusetts Institute of Technology
 Design Engineer, MB Manufacturing Company
- WHITE, ALFRED K., JR. *Survey of Business and Industry*
 B.A., Gettysburg College
 Law School, Yale University
- WILKINS, B. E. *Psychology*
 B.A., Piedmont College; B.D., Yale Divinity School
 Pastor, First Presbyterian Church, Millerton, N. Y.

**THE NEW HAVEN
YMCA JUNIOR COLLEGE**

Evening Credit Program

*OFFERING THE DEGREE
ASSOCIATE IN SCIENCE*

in

*General Studies
Business Administration
Accounting
General Engineering
Electrical Engineering
Industrial Engineering
Mechanical Engineering
Metallurgical Engineering
Management*

NEW HAVEN COLLEGE, 1957-58

CALENDAR 1957-58

The Evening Credit Program

Summer Session 1957

			1957
Registration period opens	Monday		May 13
Registration period closes	Saturday	12 Noon	June 8
Tuition due on or before	Saturday	12 Noon	June 8
Placement Examinations:			
English examinations	Monday	7:15 P.M.	June 10
Psychological examination	Tuesday	7:15 P.M.	June 11
Mathematics examination	Tuesday	8:30 P.M.	June 11
Classes begin	Monday	7:00 P.M.	June 24
Independence Day (holiday)	Thursday and Friday		July 4-5
Labor Day (holiday)	Monday		September 2
Final examinations end	Friday		September 6

Fall Semester 1957

Registration period opens	Monday		August 5
Placement Examinations:			
English examinations	Thursday	7:15 P.M.	August 22
Psychological examination	Friday	7:15 P.M.	August 23
Mathematics examination	Friday	8:30 P.M.	August 23
Registration period closes	Monday	9:30 P.M.	September 9
Tuition due on or before	Monday	9:30 P.M.	September 9
Placement Examinations:			
English examinations	Tuesday	7:15 P.M.	September 10
Psychological examination	Wednesday	7:15 P.M.	September 11
Mathematics examination	Wednesday	8:30 P.M.	September 11
Assembly for new students	Monday	7:30 P.M.	September 23
Classes begin	Thursday	7:00 P.M.	September 26
Last date for admission of former students and transfers	Wednesday	7:00 P.M.	October 16
Thanksgiving (holiday)	Thursday and Friday		November 28-29
Christmas recess			December 21- January 5

1958

Classes resume	Monday	7:00 P.M.	January 6
Final examinations begin	Monday	7:00 P.M.	January 27
Final examinations end	Friday		January 31
Recess			February 1-13

Spring Semester 1958

Registration period opens	Monday		January 6
Registration period closes	Saturday	12 Noon	January 25
Tuition due on or before	Saturday	12 Noon	January 25
Placement examinations:			
English examinations	Monday	7:15 P.M.	January 27
Psychological examination	Tuesday	7:15 P.M.	January 28
Mathematics examination	Tuesday	8:30 P.M.	January 28
Classes begin	Friday	7:00 P.M.	February 14
Assembly for new students	Friday	7:45 P.M.	February 14
Last date for admission of former students and transfers	Thursday	7:00 P.M.	March 6
Spring recess			March 29- April 6
Classes resume	Monday	7:00 P.M.	April 7
Memorial Day (holiday)	Friday		May 30
Final examinations begin	Monday	7:00 P.M.	June 9
Final examinations end	Friday		June 13
Commencement	Sunday		June 22

Summer Session 1958

Registration period opens	Monday		May 19
Registration period closes	Saturday	12 Noon	June 7
Tuition due on or before	Saturday	12 Noon	June 7
Placement examinations:			
English examinations	Monday	7:15 P.M.	June 9
Psychological examination	Tuesday	7:15 P.M.	June 10
Mathematics examination	Tuesday	8:30 P.M.	June 10
Classes begin	Monday	7:00 P.M.	June 23
Independence Day (holiday)	Friday		July 4
Labor Day (holiday)	Monday		September 1
Final examinations end	Friday		September 5

Evening Credit Program

Staff Member in Charge: ALLEN C. HUTCHINSON



Aims and Objectives

Recognizing that education, in the broadest sense of the word, is a process confined not alone to the classroom, the program of instruction provided by the College takes notice of a student's job as well as his instructional experiences.

The College believes that work is good educational experience, but that when work experience is related to academic instruction it is better. It, therefore, contends that a student's work experiences and academic experiences should be integrated as much as is possible and feasible. It sees this integration as a means whereby the traditional barrier between the academic and the practical may be broken down.

In accordance with this point of view, the College encourages and assists its students either to seek employment which is related to their programs of study, or to pursue programs of study which are related to their present or contemplated work. This the College does because it regards the student's job as a laboratory where he may apply the knowledge he gains at the College, or from which he receives practical incentives for study in the classroom. As is to be expected, the degree of relationship between work and study will vary among companies depending on the variety of experience possible in a given company and the degree of cooperation developed between the College and the company in planning for these relationships.

It is important that students pursue a related work program after the first year of study. It has been found that, although not essential to the more elementary work of the first year, work experience is essential thereafter if the student is to progress with the general level of his classes. Dependence is placed on work experience for acquiring technical terminology, skill, and familiarity with illustrations which will be used in classes. While the degree of essential relationship between work and study may be slight in even the second year, the need progressively increases in the advanced stages of the program. The most elementary office jobs for a business student, or comparable plant jobs for an engineering student, are considered sufficiently related for the earlier part of the program.

The placement activity of the College, described elsewhere in this bulletin, is designed primarily to implement the idea of an integrated program of related work and study.

Admission of Students

With the exception of "auditors", students wishing to take any course in the Evening Credit Program, whether or not they seek a degree, must satisfy the admission requirements.

Admission of Students from Secondary Schools

Requirements — The following regulations apply to the admission of students from secondary schools.

The applicant should be a graduate of an approved secondary school or should possess a state high school diploma.* In some cases, an adult who has completed at least two years of secondary school with satisfactory record may be considered, provided he performs exceptionally well on the placement examinations which are required. The admission of such an adult will be tentative for one year, during which time he must pass the state examinations for the state high school diploma.* No person will be considered who has not completed at least two years of secondary school. The quality of the secondary school record, especially of the academic subjects it contains, is given greater consideration than is the specific pattern of courses taken in secondary school.

Applicants from secondary schools are required to take certain placement examinations as follows:

The Psychological Examination, which is a measure of scholastic ability, is required of *all*. In conjunction with the secondary school record it determines the acceptability of the student.

The Mechanics of English Examination, which is a test of English usage, spelling, punctuation and capitalization, is required of *all*. Applicants otherwise admitted who do not perform satisfactorily on this test will be required to enroll in E1, Grammar Laboratory, before enrolling in E 13, Writing Laboratory.

The Reading Comprehension Examination, which is a test of reading speed and comprehension, is required of *all*. Since reading deficiency is a serious handicap, applicants otherwise admitted who do not perform satisfactorily on this test will be required to schedule Reading Laboratory early in their program.

The Mathematics Examination, which covers plane geometry and two years of high school algebra, is required of all *engineering* or *mathematics students* who wish to begin their mathematics study at any level above M 1-2, Basic Mathematics I. Performance in this examination will determine whether the applicant, otherwise admitted, will be placed in M 1-2, in M 3-4, in M 13, or in M 14. Electing not to take the examination automatically places the student in M 1-2, Basic Math I.

Admission of Students Transferring from Other Colleges

Requirements — Transfer students who present evidence of completion of at least thirty semester hours of study at an accredited college with an overall average of "C" or better may be admitted on the basis of an official transcript and will not be required to take the Psychological Examination.

* Information regarding the examinations for the state high school diploma may be obtained from the Director of Student Personnel, or by writing to the Bureau of Youth Services, State Department of Education, State Office Building, Hartford, Connecticut.

For the purpose of determining placement, the following examinations are required as indicated below:

The *Mechanics of English Examination* and the *Reading Comprehension Examination* are required unless the transcript shows the completion of at least three semester hours of college English with a grade of "C" or better.

The *Mathematics Examination* is required if the student wishes to undertake engineering or mathematics, unless his transcript shows the completion of at least three semester hours of college mathematics with "C" or better grades.

Placement in courses as a result of the above examinations will be on the same basis as for applicants from secondary schools.

Transfer students who *do not have* the required thirty semester hours of work as noted above, or who have been dismissed for academic deficiency, are required to take the Psychological Examination in addition to the other placement examinations which are applicable, as described above.

Transfer students who are not certain of the quality of their previous work are advised to take all entrance examinations lest their transcript be delayed and of an unacceptable quality.

Advanced Standing — Credit for work applicable to the program undertaken at New Haven College will be granted tentatively upon receipt of official transcript from the previous college, and the student will be notified of the credit granted. It will be officially granted only upon the successful completion of a year's work at New Haven College.

Transfer students who wish to fulfill the requirements for the A.S. degree at New Haven College must complete a minimum of eighteen semester hours at this College, twelve of which must be in their field of specialization.

Admission to Advanced Courses Without Presenting Formal Prerequisites

Students who have been admitted to the College according to the requirements for admission and who wish to undertake a course for which they lack the formal prerequisites as listed in the course description may attempt to demonstrate their qualifications to take the advanced course by either of two methods: the Qualifying Examination or the Crediting Examination.

Qualifying Examination — The Qualifying Examination is generally a two-hour written examination which covers the prerequisite course in question. Successfully passing the examination grants permission to enter the subsequent course, but establishes no credit for the course covered by the examination.

The Qualifying Examination is not available to candidates for the degree. Application is made to the Dean.

Crediting Examination — The Crediting Examination provides means whereby credit may be established for a course by examination. Since it is the policy of the College that no student shall be required to take courses

which he does not need because of previous experience or education, and since his previous experience or education may have been with a non-accredited institution or agency, or in the armed forces from which situations official transfer of credit is impossible, a student may meet course prerequisites and/or establish credit in specific courses by passing successfully a Crediting Examination in each of the courses in which he feels qualified.

Students desiring to undertake a Crediting Examination should first discuss the matter with the Dean. If it is agreed that the examination is feasible, an application accompanied by a fee of fifteen dollars is submitted and the examination is then arranged.

A Crediting Examination normally will consist of a three-to-four-hour written and a one-hour oral examination.

At least one year's successful study must be completed at the college before credit awarded by examination will be granted officially.

Application and Admission Procedures

There is no application form for the Evening Credit Programs. Application must be made in person.

Those interested in seeking admission should phone or write the College and arrange for a personal interview with a staff member. At the time of the interview the applicant will complete a Personal Data Form and will plan his program. Interviews may be scheduled during office hours at the convenience of the applicant.

During the registration period and after the conclusion of the interview, the student who has decided to seek admission completes registration forms indicating the courses he wants, pays the application fee and, depending upon the date of registration, also pays the tuition charges. Only the tuition is refundable and then only in the event that the College does not accept the applicant.

Following registration, the College requests the secondary school record of the applicant. Applicants who wish to present college transcripts, either for admission purposes or for advanced standing, must themselves request their college transcript to be sent to the College. The College provides a form on which the applicant may make this request.

The applicant next takes such placement examinations as are required of him and is notified in writing of his acceptance or rejection, and of the subjects he will be required to take as a result of his performance on the placement examinations.

Class admission cards and book lists will be mailed to the registrant immediately preceding the opening of classes.

Classification of Students

There are three classifications of students in the Evening Credit Program: Degree Student, Non-Degree Student, and Auditor.

Degree Student — The degree student indicates on his registration that he is undertaking to complete the requirements for the A.S. Degree in one of the Evening Credit Programs. He must satisfy all the admission requirements and be a fully matriculated student.

Non-Degree Student — The non-degree student is one who does not intend to meet all the requirements for the A.S. Degree, but who wishes to select certain subjects which are offered as a part of the degree requirements. Although not seeking a degree, the non-degree student must satisfy all admission requirements in the same way as the degree student, thus making it possible for him to become a degree candidate at any registration simply by so indicating on his registration. Although the student is non-degree, he must be fully matriculated.

Auditor — The classification of auditor is assigned to persons who wish merely to attend class and listen to the discussion. Since they are not required to meet any of the admission requirements, they are not privileged to participate in discussion, nor to have tests and examinations graded by the instructor; they are not subject to attendance regulations, and are not granted any credit. In fact, no record of auditors will be kept.

Registration

Degree and Non-Degree Students — There are two parts to registration: the completion of the registration forms and the payment of tuition. Both should be completed before the closing date of registration as stated in the calendar. There is a penalty fee for delaying either of these two processes beyond the closing date of registration.

There is no registration day. Registration is possible within office hours during the registration dates stated in the calendar.

Registering must be in person at the College office. Forms are not mailed to students.

A separate registration is required for each of the semesters and for the summer session.

New students must be interviewed before they register.

Auditors — Auditors do not register. They merely request the privilege of auditing a course, and upon payment of tuition in full will be given a card naming the course they wish to audit. This card is used as a ticket of admission to class.

Changes of Registration and Schedules

Students are urged to plan their program carefully before completing the registration forms in order to avoid the need for requesting changes. Once the registration has been completed, the student is charged the Change of Registration Fee for each request for change which he makes. The fee is charged whether or not the request is granted, and is payable when the student completes the form requesting the change. There is no Registration Change Fee charged, however, for a request to add a course.

Schedule of Hours and Subject Load

All courses offered in the Evening Credit Program are scheduled to meet from 7:00 P.M. to 9:45 P.M. The College is operated Monday through Friday. Subjects valued at three semester hours of credit per semester meet

one evening per week; those valued at six semester hours per semester meet two evenings per week.

A student may carry as little as three semester hours or as many as nine, depending on his wishes. The same academic standards are required of the student, regardless of the number of credits he carries.

Placement Service for Evening Credit Students

The College receives requests from both students and employers for job placement services. Although the College does not conceive its function to be that of a public employment service, it is interested in and prepared to render placement service within the limitations of its purposes and resources. It acts as a medium of exchange of information between students and former students who desire placement, and employers seeking personnel. It is particularly interested in helping students find positions which require college study or which lead to positions that require such education, and in assisting students to find employment related to their program of studies.

How the Placement Service Operates —

1. For present or former students who are unemployed.

When a present or former student who is unemployed seeks placement, the College will notify him of available positions listed with the College.

2. For present or former students who are employed.

When an employed student or former student requests placement service, the College encourages the student to talk with his company coordinator concerning the possibilities within his own company. Since the College has a very close working relationship with certain companies through their participation in its development program under Employee Training Agreements, it is in an especially favorable position to discuss the student's case with the coordinators of these companies. It is only after the College is convinced that the best interests of the student will be served that it will undertake placement services for the student who is already employed.

3. In handling requests from companies.

When a company requests the College to recommend students to fill a position, it will, if possible, refer qualified students to the company after having followed the procedure outlined above. It cannot undertake to search for applicants outside of the group who have indicated their desire for placement.

4. For students desiring placement.

A student or former student of the College who desires placement should call at the office for a placement application form and at that time will receive specific information as to whom he is to contact in regard to his placement problem.

5. For companies wishing to use the placement facilities of the College.

A company wishing to use the placement facilities of the College should list the job and the desired qualifications in the form of a letter. A member of the College staff will then contact the company to discuss procedure and possibilities of filling the position.

Tuition Charges, Payments, and Refunds

EVENING CREDIT PROGRAM

Tuition Charges — Tuition charges are based on a rate of fifteen dollars (\$15.00) per semester hour or equivalent time for all courses offered in the Evening Credit Program. The charges are:

One course (three semester hours) or equivalent	\$ 45.00
Two courses (six semester hours) or equivalent	90.00
Three courses (nine semester hours) or equivalent	135.00

Payments — IT IS EMPHASIZED THAT NO STUDENT IS REGISTERED UNTIL HE HAS MET THE REQUIREMENTS OF THE PAYMENT SCHEDULE IN ADDITION TO THE REGULATIONS DESCRIBED ON PAGES 30 TO 34.

All students are encouraged to make tuition payments in full. However, provision is made for those who wish to defer their payments, the procedure for which follows:

1. An initial payment in cash consisting of:
 - a. Partial payment of tuition.
 - b. Full payment of all fees.
 - c. Payment of a service charge of five dollars (\$5.00) for the processing and servicing of a promissory note (see 2 below).
2. The making of a promissory note (signature of parent or guardian required of minors) for the balance of the total tuition charges.

Schedule of Payments

	<i>Initial Payment By Closing Date</i>	<i>Second Payment Nov. 1</i>	<i>Third Payment Dec. 1</i>
Fall Semester			
One course (3 sh)	\$45.00	No provision for deferment	
Two courses (6 sh)	50.00	\$20.00	\$20.00
Three courses (9 sh)	55.00	40.00	40.00
Spring Semester (1958)			
		<i>Mar. 1</i>	<i>Apr. 1</i>
One course (3 sh)	\$45.00	No provision for deferment	
Two courses (6 sh)	50.00	\$20.00	\$20.00
Three courses (9 sh)	55.00	40.00	40.00
Summer Session (1958)			
		<i>July 15</i>	<i>Aug. 15</i>
One course (3 sh)	\$45.00	No provision for deferment	
Two courses (6 sh)	50.00	\$20.00	\$20.00

NOTE: Charges for all applicable fees are *in addition* to the above listed tuition payments, are paid in full at the time of registration and are *not refundable*.

Refunds — Tuition is refunded or cancelled by one of two methods:

1. On a percentage basis prior to the fifth meeting of any class and for any reason.
2. On a pro-rata basis of three dollars (\$3.00) per class session at any time during a semester for specific reasons having to do with illness, job changes, and draft into the armed services.

Refer to the information which follows for details of operation of the two methods.

**Refunds on a Percentage Basis for Withdrawals—
Regardless of Reasons**

Refunds or cancellations are made on a per course basis, the *effective date* being the date the student notifies the College of his withdrawal.

If the effective date of withdrawal occurs—

1. Anytime prior to the first meeting of class, the amount refunded or cancelled is 80%.
2. Anytime after the first and prior to the second meeting of class, the amount refunded or cancelled is 60%.
3. Anytime after the second and prior to the third meeting of class, the amount refunded or cancelled is 40%.
4. Anytime after the third and prior to the fourth meeting of class, the amount refunded or cancelled is 20%.
5. After the fourth meeting of class there is no refund or cancellation.

Refunds will be made only when the amount of tuition actually paid exceeds the amount for which the student is responsible in accordance with the above schedule. If the amount paid is less than the amount the student is responsible for, then the unpaid amount must be paid on the date of the withdrawal notice, the promissory note being cancelled.

IMPORTANT: The student must initiate this entire procedure by informing the College *in writing* of his intention to withdraw.

Refunds on a Pro-rata Basis for Withdrawal for Specific Reasons

Refunds or cancellations are made on the basis of three dollars (\$3.00) per class session. The student is charged at this rate for all sessions which have occurred prior to the date of the withdrawal notice and is refunded at the same rate for all sessions scheduled after the withdrawal notice. Refunds are made only when the amount of tuition actually paid exceeds the charge. If the amount paid is less than the amount for which the student is responsible, then the balance owed by the student is immediately payable, the promissory note being cancelled.

Refunds will be made at any time during any semester, but only for the following reasons:

1. Protracted illness of the *student* evidenced by a letter or certificate from the attending physician.

- 2. Induction (not enlistment) into the armed services, evidenced by a photostatic copy of the draft notice.
- 3. Job changes *initiated by the employer* involving:
 - a. A change to a shift which precludes meeting the College's schedule of classes or
 - b. A change to a location which is beyond the normal commuting distance from the College, both of which must be evidenced by a letter written on company stationery and signed by an officer of the employing company.

IMPORTANT: The student must initiate this entire procedure by informing the College *in writing* of his intention to withdraw. After the withdrawal notice and upon receipt by the College of the evidence referred to above, the refund will be made.

Fees — Evening Credit Program

APPLICATION FEE	\$5.00
Payable only once at the initial time of application. NOT REFUNDABLE.	
TUITION — See pages 36 to 38.	
STUDENT ACTIVITY FEE	\$1.00
Charged at the rate of \$1.00 per three semester hour course per semester. NOT REFUNDABLE.	
PROMISSORY NOTE SERVICE CHARGE	\$5.00
Payable at the time each promissory note is made. NOT REFUNDABLE.	
LATE FEE	\$2.00
Assessed for failure to submit registration forms <i>or</i> to make the initial required tuition payments by the closing date of registration each semester. NOT REFUNDABLE.	
CHANGE OF REGISTRATION FEE	\$2.00
This fee is assessed following submission of registration cards in all cases involving: Dropping a course or courses Substituting courses Requesting assignment to a different section of the same course where no preference has previously been stated. NOT REFUNDABLE.	
MAKE-UP EXAMINATION FEE	\$5.00
Assessed when a student requires an end-of-semester examination at other than the scheduled time except for conflicts caused by the examination schedule. NOT REFUNDABLE.	
CREDITING EXAMINATION FEE	\$15.00
Assessed for each examination requested by a student for the purpose of establishing credit in lieu of taking a course. NOT REFUNDABLE.	
DIPLOMA FEE	\$10.00
Payable one month prior to graduation. NOT REFUNDABLE.	
CAP AND GOWN RENTAL FEE	\$2.50
Payable one month prior to graduation. NOT REFUNDABLE.	

The Summer Session of the Evening Credit Program



The College offers a summer session with these primary functions:

1. To offer opportunity for summer study to those residents of the New Haven area who attend other schools during the regular school year. For financial reasons, most of these students find it desirable to live at home and work during the summer. The summer program of the College is confined to evening classes; therefore, it is possible to work during the day and attend classes in the evening. Reasons for summer study vary, but are generally confined to the following:
 - a. To make up deficiencies.
 - b. To satisfy prerequisites for courses in the parent institution.
 - c. To acquire advanced standing in the parent school.

Experience has shown that the credits earned at the College are acceptable to parent institutions. The College is a member of the New England Association of Colleges and Secondary Schools. For additional assurance of the acceptance of credit by the parent school, prior approval by that school is advisable.

2. To provide opportunity for summer study to the students of the College. Reasons for summer study for this group of students may be described as follows:
 - a. To lighten the study load during the regular school year, but still meet the yearly requirements of the four year program.
 - b. To shorten the normal time required for a degree.
 - c. To take preparatory work.
 - d. To make up deficiencies caused by failure in certain courses.
 - e. To take additional work beyond the degree requirements and yet complete a program within the normal time of four years.

NOTE: The accomplishment of any one of the five objectives listed above will depend on the specific subjects offered during any summer session.

Registration — For all new students a personal interview with a staff member of the College is necessary. Registration procedures will be explained at this time. For those new students who desire work for credit in other institutions, prior approval should be obtained from those institutions (see 1 above). This procedure should be followed each semester regardless of previous attendance.

For those students who are new and who plan to attend the College as permanent students, a personal interview with a staff member is necessary prior to registration.

For those students who are already enrolled, the registration procedure is the same as for any semester. However, these students are advised to consult with a staff member in order to assure the proper selection of courses for the accomplishment of their specific objectives.

Admission Requirements

See admission requirements for the Evening Credit Program.

Calendar

Study begins no earlier than the last week in June and ends no later than the second week in September. Classes meet on Monday, Wednesday, and Friday evenings with the holidays of July Fourth and Labor Day observed. Certain classes require attendance every school night, others on alternate school nights. "School nights" are Monday, Wednesday, and Friday.

Credit

Courses at college level meeting three evenings per week offer six semester hours of credit; those meeting on three evenings every two weeks offer three hours of credit.

Courses

Courses offered during the Summer Session are, for the most part, courses of a general nature and beginning courses in the various fields of technical education which are offered during the regular academic year. Courses usually offered in the Summer Session are:

Economics	Physics
Engineering Drawing	Psychology
Grammar (Preparatory)	Reading (Preparatory)
Law	Sociology
Mathematics (Preparatory)	Speech
Mathematics	Writing

Call or write the College for the current summer schedule.

For Summer Session Fees, see page 36.

Program of General Studies



It is recognized that there are certain groups of students who desire a general education. These students may be categorized as follows:

1. Those who wish a college degree in the field of general studies, but who do not desire to spend four years in a senior college.
2. Those who have not yet decided which technical field they want to specialize in, but who, in the meantime, desire an education of a general nature.
3. Those who want a general education and degree at junior college level for later transfer to a senior college for a bachelor's degree.
4. Those college graduates of technical programs who now find that their need lies in the field of general studies and the corresponding acquisition of educational breadth.

The College is meeting the needs of these students by offering the program outlined below. The degree Associate in Science in General Studies is awarded upon the successful completion of the requirements. A total of 60 to 63 semester hours of study is required. It is expected that this will involve a minimum of four years of part-time study.

The total hours required are distributed as follows:

I. Required courses, totaling			39 sem. hrs.
E 1	Grammar Laboratory	3 s.h.*	
E 13	Writing Laboratory	3 s.h.	
E 14	Speaking Laboratory	3 s.h.	
E 18	Modern Literature (Spring only)	3 s.h.	
Ec 33-34	Economics	6 s.h.	
Phil 11	Philosophy (Fall only)	3 s.h.	
P 23-24	Psychology	6 s.h.	
Sc 11-12	Modern Science	6 s.h.	
Soc 13-14	Modern Civilization	6 s.h.	
II. Elective courses, totaling			24 sem. hrs.
To be selected from any credit offering of the College for which the student satisfies prerequisites. See course description section of this catalog.			

TOTAL REQUIRED FOR DEGREE 60-63 sem. hrs.

For other courses available as substitutes or electives at Quinnipiac College, consult the Dean.

• May be satisfied by placement examination.

Program of Business



The Program of Business offers curricula leading to the Associate in Science degree in the fields of Accounting and of Business Administration, each of which is described in the following pages.

The flexibility provided through the choice of electives within each field makes it possible for a student to plan his program to suit his needs and interests. For example, within the Accounting field it is possible to specialize in *public accounting*, in *industrial accounting*, or in *general accounting*; and within the Business Administration field it is possible to specialize in *office management*, or in *general business administration*. Each of these programs is made possible through the judicious selection of electives.

Business Administration

In order to acquire the Associate in Science in Business Administration, students must take a pattern of business courses in addition to their advanced courses in the specific business fields of Business Administration or Office Management. The successful completion of these courses grants the student thirty-six semester hours of credit of the sixty-three to sixty-six semester hours required for the degree. Of the remaining thirty semester hours beyond the required pattern, the student must elect twenty-four semester hours from the field of business. The remaining six semester hours may be elected from the field of business or from any other field of study. Prerequisites for all electives must be satisfied either by formal courses or by equivalent practical experience.

Since many of the electives may be offered in alternate years only, it is essential that the student consult with a staff advisor during his first year in order to plan the pattern of courses for the following years.

Requirements for the degree fall into three groups and are outlined below:

I. Required courses, totaling			36 sem. hrs.
*E 1	Grammar Laboratory	3 s.h.	
A 11-12	Introductory Accounting	6 s.h.	
P 23-24	General Psychology	6 s.h.	
E 13	Writing Laboratory	3 s.h.	
E 14	Speaking Laboratory	3 s.h.	
L 11-12	Law of Contracts and Business Association	6 s.h.	
Ec 33-34	Economics	6 s.h.	
E 19	Technical Report Writing	3 s.h.	

* May be satisfied by placement examinations.

II. Restricted electives, totaling	24 sem. hrs.
A 21-22 Intermediate Accounting	6 s.h.
*A 23-24 Cost Accounting	6 s.h.
BA 21-22 Business Finance	6 s.h.
BA 31-32 Public Relations	6 s.h.
*L 21 Law of Sales (Fall Only)	3 s.h.
*L 22 Law of Commercial Papers and Bankruptcy (Spring Only)	3 s.h.
OM 11-12 Office Organization and Management	6 s.h.
PS 22 Fundamentals of Supervision (Spring Only)	3 s.h.
PS 23-24 Personnel Administration	6 s.h.
PS 43-44 Management-Labor Relations	6 s.h.
SM 11-12 Principles of Selling	6 s.h.

* Now offered in alternate years. See course description.

III. Unrestricted electives, totaling	6 sem. hrs.
(Any credit course offered by the College)	
TOTAL REQUIRED FOR DEGREE	63-66 sem. hrs.

For other courses available as substitutes or electives at Quinnipiac College, consult the Dean.

Accounting

In order to acquire the Associate in Science in Accounting, all students are required to take basic courses in accounting, law, English, and economics. The successful completion of these courses grants the student thirty semester hours credit of the sixty-three to sixty-six semester hours required for the degree. Of the remaining thirty-six semester hours of credit required for the degree, thirty semester hours must be elected from the group of restricted electives listed below, with a minimum of eighteen semester hours elected in accounting. The remaining six semester hours of credit may be elected from any field of study. Prerequisites for all electives must be satisfied either by formal courses or by equivalent practical experience.

Since many of the electives may be offered in alternate years only, it is essential that the student consult with a staff advisor during his first year in order to plan the sequence of courses for the following years.

Requirements for the degree fall into three groups and are outlined below:

I. Required courses, totaling	30 sem. hrs.
E 1 Grammar Laboratory	3 s.h.**
A 11-12 Introductory Accounting	6 s.h.
L 11-12 Law of Contracts and Business Association	6 s.h.
Ec 33-34 Economics	6 s.h.
E 13 Writing Laboratory	3 s.h.
E 14 Speaking Laboratory	3 s.h.
E 19 Technical Report Writing	3 s.h.

** May be satisfied by placement examination.

II. Restricted electives, totaling				30 sem. hrs.
(Must include at least 18 hours of accounting courses plus 12 semester hours of additional courses from those listed below.)				
A 21-22	Intermediate Accounting	6 s.h.	A 41-42	Income Tax Procedure 6 s.h.
*A 23-24	Cost Accounting	6 s.h.	IA 11-12	Industrial Organization
A 31	Advanced Accounting			& Management
	(Fall)	3 s.h.	IA 41-42	Methods Engineering
A 32	Advanced Accounting		*L 21	Law of Sales (Fall)
	(Spring)	3 s.h.	*L 22	Law of Commercial
*A 33-34	Auditing	6 s.h.		Paper and Bankruptcy
				(Spring)

* Now offered in alternate years. See course description.

III. Unrestricted electives, totaling				6 sem. hrs.
(Any credit course offered by the College.)				
TOTAL REQUIRED FOR DEGREE				63-66 sem. hrs.

For other courses available as substitutes or electives at Quinnipiac College consult the Dean.

Program of Production Engineering

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An example of industrial-educational co-operation is the program of study under which New Haven College and the Winchester Arms Division of the Olin Mathieson Chemical Corporation have joined forces in the training of engineering aides in production engineering.

The program gives qualified employees of the chemical company three years of on-the-job training, leading to fifty-six semester hours credit. The underlying purpose of this program is to train engineering aides in order to relieve graduate engineers from routine operations. Since the outside recruitment of competent engineering aides has become almost an impossibility, the company and the college are both optimistic that this three-year curriculum will provide a partial solution to the engineering shortage in this particular situation.

The program is entirely company financed. Candidates must qualify by passing the New Haven College entrance examinations after being approved through testing and interviewing by a screening committee from the company. Those who are accepted attend classes three days a week from 3:30 to 6:00 p.m. for eight 15-week semesters. They remain on their present jobs for the first semester at which point they transfer to engineering departments for on-the-job trainee assignments during the remainder of the program.

Program of Engineering



The Program of Engineering offers curricula leading to the Associate in Science degree in each of the following fields: General Engineering, Electrical Engineering, Industrial Engineering, Mechanical Engineering, and Metallurgical Engineering, each of which is described separately on the following pages.

The flexibility provided through the choice of electives within each field makes it possible for a student to plan his program to suit his needs and interests. For example, within Mechanical Engineering it is possible to specialize in *tool design* or in *machine design*; and within Electrical Engineering it is possible to specialize in *communications*, in *power*, or in *electronics*, by careful selection of restricted electives.

Each of the programs is based on standard four-year engineering curricula and includes the essential professional courses, somewhat streamlined and concentrated. Any program in engineering pre-supposes a strong background in mathematics. The College determines the strength of a student's background through its placement examinations. Performing satisfactorily on the placement examinations may make it possible for the College to waive the requirements of M 1-2 and M 3-4 (Basic Mathematics I and II), and thereby to reduce the number of credits required of a student for his degree.

GENERAL ENGINEERING

The primary purpose of the General Engineering program is to meet the needs of those students who have reason not to specialize in any of the specific fields of engineering offered by the College (Electrical, Industrial, Mechanical, and Metallurgical). Their particular need may cut across any two or more of these special fields.

A basic sequence of courses is required for the first three years. By successfully completing this required sequence the student acquires sixty semester hours of credit of the eighty-four required for the degree. In order to be granted the Associate in Science in General Engineering, the student must complete twenty-four additional semester hours of credit. Of this twenty-four hours, eighteen must be elected from advanced engineering courses. The remaining six semester hours of credit may be elected from technical or non-technical courses, depending entirely on the student's desires and his ability to satisfy prerequisites either by formal courses or by previous practical experience.

Since most of the technical electives and some of the non-technical ones are offered in alternate years, it is extremely important that the student consult with the department chairman or a staff advisor during the latter portion of his second year in order to outline his program for the third and fourth years.

Requirements for the degree fall into three groups and are outlined below:

I. Required courses, totaling 60 sem. hrs.

FIRST YEAR

E 1	Grammar Laboratory	3 s.h.*
M 1-2	Basic Mathematics I	6 s.h.*
M 3-4	Basic Mathematics II	6 s.h.*
E 14	Speaking Laboratory	3 s.h.

* May be satisfied by placement examinations.

SECOND YEAR

M 13	Trigonometry (Fall only)	3 s.h.
M 14	Algebra and Analytic Geometry (Spring only)	3 s.h.
D 11-12	Engineering Drawing	6 s.h.
Ph 11-12	Engineering Physics	6 s.h.

THIRD YEAR

M 21-22	Differential and Integral Calculus	6 s.h.
EM 27	Mechanics (Fall only)	3 s.h.
EM 28	Strength of Materials (Spring only)	3 s.h.
EE 23-24	Electrical and Magnetic Circuits	6 s.h.

FOURTH YEAR

E 13	Writing Laboratory	3 s.h.
E 19	Technical Report Writing	3 s.h.

II. Restricted electives, totaling 18 sem. hrs.

These restricted electives must be from among the following fields of engineering:

Drawing & Design	Engineering Mechanics	Physics
Electricity	Metallurgy	

III. Unrestricted electives, totaling 6 sem. hrs.

(Any credit course offered by the College.)

TOTAL REQUIRED FOR DEGREE 69-84 sem. hrs.

For other courses available as substitutes or electives at Quinnipiac College consult the Dean.

Electrical Engineering

The Electrical Engineering program is designed so that the first three years consist of a sequence of courses required of all students. This sequence may be described as basic electrical engineering. The successful completion of this sequence establishes the student as a candidate for the Associate in Science in Electrical Engineering. In order to complete the degree requirements, the student must acquire at least eighteen semester hours of credit beyond the basic sequence requirements of sixty-six semester hours making a total of eighty-four semester hours of credit. Of the eighteen hours beyond the basic sequence, twelve hours must be taken in advanced courses in electricity while the remaining six hours are unrestricted electives.

During the latter part of his second year, the student should consult a staff advisor to outline the sequence of courses for the remaining portion of his degree requirements. Since most electives are offered on an alternate year basis, proper planning by both student and advisor is essential.

Requirements for the degree fall into three groups and are outlined below:

I. Required courses, totaling 66 sem. hrs.

FIRST YEAR

E 1	Grammar Laboratory	3 s.h.*
M 1-2	Basic Mathematics I	6 s.h.*
M 3-4	Basic Mathematics II	6 s.h.*
E 14	Speaking Laboratory	3 s.h.

* May be satisfied by placement examinations.

SECOND YEAR

M 13	Trigonometry (Fall only)	3 s.h.
M 14	Algebra and Analytic Geometry (Spring only)	3 s.h.
D 11-12	Engineering Drawing	6 s.h.
Ph 11-12	Engineering Physics	6 s.h.

THIRD YEAR

M 21-22	Differential and Integral Calculus	6 s.h.
EE 23-24	Electrical and Magnetic Circuits	6 s.h.
E 13	Writing Laboratory (Fall only)	3 s.h.
E 19	Technical Report Writing	3 s.h.

FOURTH AND FIFTH YEARS

EE 31-32	Alternating Current Circuits	6 s.h.
EE 43-44	Elementary Electronics	6 s.h.

II. Restricted electives, totaling 12 sem. hrs.

Must include twelve semester hours from among the following:

Offered in September of ODD Years

EE 41-42	A.C. Machines	6 s.h.
EE 45-46	Communications Circuits	6 s.h.

Offered in September of EVEN Years

EE 37-38	Power Transmission	6 s.h.
EE 47-48	Advanced Electronics	6 s.h.
EE 35-36	D.C. Machines	6 s.h.

III. Unrestricted electives, totaling 6 sem. hrs.

(Any credit courses offered by the College.)

TOTAL REQUIRED FOR DEGREE 69-84 sem. hrs.

For other courses available as substitutes or electives at Quinnipiac College consult the Dean.

Industrial Engineering

The Industrial Engineering Program combines basic mechanical engineering with basic study in the field of industrial administration. A sequence of required courses provides the basic study in both fields. Provision is then made for elective courses in accordance with the need of the student. The Associate in Science in Industrial Engineering is awarded upon completion of all requirements.

Requirements for the degree fall into three groups and are outlined below:

I. Required courses, totaling 66 sem. hrs.

FIRST YEAR

E 1	Grammar Laboratory	3 s.h.*
E 14	Speaking Laboratory	3 s.h.
M 1-2	Basic Mathematics I	6 s.h.*
M 3-4	Basic Mathematics II	6 s.h.*

* May be satisfied by placement examinations.

SECOND YEAR

M 13	Trigonometry (Fall only)	3 s.h.
M 14	Algebra and Analytic Geometry (Spring only)	3 s.h.
D 11-12	Engineering Drawing	6 s.h.
Ph 11-12	Engineering Physics	6 s.h.

THIRD YEAR

EM 27	Mechanics (Fall only)	3 s.h.
EM 28	Strength of Materials (Spring only)	3 s.h.
A 13	Industrial Accounting (Fall only)	3 s.h.
IA 14	Management Survey (Spring only)	3 s.h.
IA 41-42	Methods Engineering	6 s.h.

FOURTH AND FIFTH YEARS

E 13	Writing Laboratory (Fall)	3 s.h.
E 19	Technical Report Writing (Spring)	3 s.h.
D 21	Introduction to Design (Fall only)	3 s.h.
E 22	Electrical Survey (Spring only)	3 s.h.

II. Restricted electives, totaling		12 sem. hrs.
IA 33	Cost Control (Fall only)	3 s.h.
IA 34	Production Control (Spring only)	3 s.h.
IA 35-36	Statistical Quality Control	6 s.h.
PS 22	Fundamentals of Supervision (Fall only)	3 s.h.
PS 23-24	Personnel Administration	6 s.h.
PS 43-44	Management-Labor Relations	6 s.h.
PS 42	Conference Leadership (Spring only)	3 s.h.
S 11-12	Industrial Safety	6 s.h.

III. Unrestricted electives	6 sem. hrs.
TOTAL REQUIRED FOR DEGREE	69-84 sem. hrs.

For other courses available as substitutes or electives at Quinnipiac College consult the Dean.

Mechanical Engineering

The Mechanical Engineering program consists, in the first three years of a sequence of courses totaling sixty semester hours required of all students. This sequence may be called basic mechanical engineering. The successful completion of this sequence establishes the student as a candidate for the Associate in Science in Mechanical Engineering. In order to complete the requirements for the degree, the student must acquire at least 24 semester hours of credit, making a total of eighty-four hours of credit. Of the twenty-four hours beyond the basic sequence, eighteen hours must be taken in advanced courses in mechanical engineering. The remaining six hours are unrestricted electives.

During the latter part of his second year, the student should consult a staff advisor in order to plan the sequence of courses for the remaining portion of his degree requirements. Since most of the electives are offered in alternate years, proper planning by both student and advisor is essential.

Requirements for the degree fall into three groups and are outlined below:

I. Required courses, totaling 60 sem. hrs.

FIRST YEAR

E 1	Grammar Laboratory	3 s.h.*
M 1-2	Basic Mathematics I	6 s.h.*
M 3-4	Basic Mathematics II	6 s.h.*
E 14	Speaking Laboratory	3 s.h.

* May be satisfied by placement examinations.

SECOND YEAR

M 13	Trigonometry (Fall only)	3 s.h.
M 14	Algebra and Analytic Geometry (Spring only)	3 s.h.
D 11-12	Engineering Drawing	6 s.h.
Ph 11-12	Engineering Physics	6 s.h.

THIRD YEAR

M 21-22	Differential and Integral Calculus	6 s.h.
EM 27	Mechanics (Fall only)	3 s.h.
EM 28	Strength of Materials (Spring only)	3 s.h.
E 13	Writing Laboratory (Fall)	3 s.h.
E 19	Technical Report Writing (Spring)	3 s.h.

FOURTH AND FIFTH YEARS

D 21	Introduction to Design (Fall only)	3 s.h.
E 22	Electrical Survey (Spring only)	3 s.h.

II. Restricted electives, totaling 18 sem. hrs.

At least six of the eighteen semester hours must be in the field of design.

Offered in September of ODD years

EM 33	Mechanics (Fall only) ..	3 s.h.
EM 34	Dynamics of Machinery (Spring only)	3 s.h.
D 41-42	Advanced Machine De- sign	6 s.h.
*EM 23	Mechanical Processes (Fall only)	3 s.h.
*EM 26	Engineering Materials (Spring only)	3 s.h.
D 35-36	Elementary Tool Design	3 s.h.

* Offered each year.

Offered in September of EVEN years

D 33-34	Elementary Machine Design	6 s.h.
MT 41-42	Steels & Heat Treat- ment	6 s.h.
*IA 41-42	Methods Engineering	6 s.h.
D 45-46	Advanced Tool Design	6 s.h.
Ph 32-33	Thermodynamics and Heat Power	6 s.h.

III. Unrestricted electives, totaling 6 sem. hrs.

(Any credit courses offered by the College.)

TOTAL REQUIRED FOR DEGREE 69-84 sem. hrs.

For other courses available as substitutes or electives at Quinnipiac College consult the Dean.

Metallurgical Engineering

The Metallurgical Engineering program is designed so that the first three years contain a sequence of courses required of all students. Successful completion of this sequence of fifty-four semester hours establishes the student as a candidate for the Associate in Science in Metallurgical Engi-

neering. In order to complete the degree requirements, the student must acquire thirty additional semester hours credit. Of this thirty semester hours of credit, twenty-four must be elected from restricted electives while the remaining six hours of credit are unrestricted electives.

Since the first opportunity for elective courses occurs in the fourth year, the student must consult a staff advisor during the latter portion of his third year so that the course sequence may be arranged. Since most of the electives are offered in alternate years, proper planning by both student and advisor is essential.

Requirements for the degree fall into three groups and are outlined below:

I. Required courses, totaling 54 sem. hrs.

FIRST YEAR

E 1	Grammar Laboratory	3 s.h.*
M 1-2	Basic Mathematics I	6 s.h.*
M 3-4	Basic Mathematics II	6 s.h.*
E 14	Speaking Laboratory	3 s.h.

* May be satisfied by placement examinations.

SECOND YEAR

M 13	Trigonometry (Fall only)	3 s.h.
M 14	Algebra and Analytic Geometry (Spring only)	3 s.h.
D 11-12	Engineering Drawing	6 s.h.
Ph 11-12	Engineering Physics	6 s.h.

THIRD YEAR

M 21-22	Differential and Integral Calculus	6 s.h.
EM 27	Mechanics (Fall only)	3 s.h.
EM 28	Strength of Materials (Spring only)	3 s.h.
E 13	Writing Laboratory (Fall)	3 s.h.
E 19	Technical Report Writing (Spring)	3 s.h.

II. Restricted electives, totaling 24 sem. hrs.

Must include twenty-four semester hours from among the following:

Mt 21	Metallography (Fall only)	3 s.h.
*Mt 31-32	Non-ferrous Metallurgy	6 s.h.
*Mt 41-42	Steel and Heat Treatment	6 s.h.
EM 23	Mechanical Processes (Fall only)	3 s.h.
EM 26	Engineering Materials (Spring only)	3 s.h.
D 21	Introduction to Design (Fall only)	3 s.h.
EE 22	Electrical Survey (Spring only)	3 s.h.

* Now offered in alternate years. See course description.

III. Unrestricted electives, totaling 6 sem. hrs.

(Any credit course offered by the College.)

TOTAL REQUIRED FOR DEGREE 69-84 sem. hrs.

For other courses available as substitutes or electives at Quinnipiac College consult the Dean.

Program of Management

The Program of Management is designed for persons whose administrative responsibilities may be in a staff department dealing with materials, methods, and personnel phases of business. It does not include technical engineering work.

In order to acquire the Associate in Science in Management all students must take a pattern of required courses. The successful completion of the required courses grants the student forty-two semester hours of the sixty-six to sixty-nine semester hours required for the degree. Of the remaining twenty-seven semester hours beyond the required pattern, the student must elect twenty-one hours from restricted electives while the remaining six semester hours may be elected from any field of study.

Since many of the electives may be offered in alternate years only, it is essential that the student consult a staff advisor during his first year in order to plan his sequence of electives.

Requirements for the degree fall into three groups and are outlined below:

I. Required courses, totaling		42 sem. hrs.
E 1	Grammar Laboratory	3 s.h.*
IA 11-12	Industrial Organization and Management	6 s.h.
P 23-24	General Psychology	6 s.h.
E 13	Writing Laboratory	3 s.h.
E 14	Speaking Laboratory	3 s.h.
Ec 33-34	Economics	6 s.h.
S 11-12	Safety, Elementary	6 s.h.
Sc 11-12	Modern Science	6 s.h.
E 19	Technical Report Writing	3 s.h.

* May be satisfied by placement examination.

II. Restricted electives, totaling		21 sem. hrs.
Must include twenty-one semester hours from among the following:		
IA 33	Cost Control (Fall only)	3 s.h.
IA 34	Production Control (Spring only)	3 s.h.
IA 35-36	Statistical Quality Control	6 s.h.
IA 41-42	Methods Engineering	6 s.h.
PS 22	Fundamentals of Supervision (Fall only)	3 s.h.
PS 23-24	Personnel Administration	6 s.h.
PS 43-44	Management-Labor Relations	6 s.h.
PS 42	Conference Leadership (Spring only)	3 s.h.
**S 21-22	Industrial Safety, Advanced	6 s.h.
**P 21-22	Industrial Psychology	6 s.h.

** Now offered in alternate years. See course descriptions.

III. Unrestricted electives, totaling		6 sem. hrs.
(Any credit course offered by the College.)		
TOTAL REQUIRED FOR DEGREE		66-69 sem. hrs.

For other courses available as substitutes or electives at Quinnipiac College consult the Dean.

**THE NEW HAVEN
YMCA JUNIOR COLLEGE**

DESCRIPTION OF COURSES

offered in the

EVENING CREDIT PROGRAM

NEW HAVEN COLLEGE, 1957-58

Description of Courses

Courses bearing hyphenated numbers, for example, A 11-12, are two semesters in length, and the first semester is prerequisite to the second. Unless otherwise noted, they may be entered only in the Fall Semester.

Courses bearing single numbers, for example, L 22, are only one semester in length.

Courses designated by letter rather than by number are not of college grade, although they involve class and preparation time equivalent to other courses.

In the absence of formal courses, prerequisites may be satisfied by sufficient practical experience.

Accounting

A 11-12. Introductory Accounting. Credit, 6 semester hours.

This course, which is prerequisite to all other courses in accounting, familiarizes the student with fundamental principles of accounting. This work is supplemented by progress tests, problems, and systematic practice work. The fields of study covered include: interpretation of assets, liabilities, and net worth; preparation of statements; books of original entry; ledgers; and work at the end of a fiscal period.

(Offered also in Spring Semester on a two nights per week basis.)

A 13. Industrial Accounting. Credit, 3 semester hours.

(This course cannot be taken by accounting and business administration majors.)

This is a basic course designed to acquaint engineering students with the vocabulary of accounting, the accounting cycle and the presentation of accounting statements.

—Fall only.

A 21-22. Intermediate Accounting. Credit, 6 semester hours.

Prerequisite: A 11-12.

This course is a continuation at a more advanced level of the principles studied in Introductory Accounting. It is intensive and adapted to present day changes in the accounting profession. The subject matter includes: the corporation, asset valuations, liabilities, installment sales and consignments, analysis and interpretation of financial statements, sources and application of funds, depreciation methods, inventory evaluation, reserves, and surplus analysis. There is considerable practice in the form of problem solutions. Reference is made to the publications of the professional accounting societies.

A 23-24. Cost Accounting. Credit, 6 semester hours.

Prerequisite: A 11-12.

Offered in September of EVEN years. Offered in September of ODD years at Quinnipiac College.

This course embraces the study of departmental and process cost accounting, specific order cost accounting, and standard costs. Thorough consideration is given to cost elements of material, labor, and manufacturing expense. Also included is the study of cost estimating, budgets in cost control, cost relationships, and cost reports for use of management. Forms and methods used in standard costs and analyses of variances for operational use are considered. Practical application of the principles studied is given through the working of practice sets and problems.

A 31. Advanced Accounting. Credit, 3 semester hours.

Prerequisite: A 21-22.

This is the final general accounting course covering all phases of accounting not previously covered and not considered of a specialized nature. This course is given in two sections, neither section being dependent upon the other. Upon completion of these sections, the student is prepared for advanced study in specialized accounting and C.P.A. problems. This first section will treat with the following: partnership, venture accounts, consignments, installments sales, insurance, statement of affairs, receivers accounts, realization liquidation, estate and trusts.

—Fall only.

A 32. Advanced Accounting. Credit, 3 semester hours.

Prerequisite: A 21-22.

The second section, following A 31, will cover the following subjects: home office and branch accounting; parent and subsidiary; consolidation and merger. As mentioned under Advanced Accounting A 31, these two sections are independent of each other.

—Spring only.

A 33-34. Auditing. Credit, 6 semester hours.

Prerequisite: A 21-22, may be taken concurrently.

Offered in September of ODD years. Offered in September of EVEN years at Quinipiac College.

This course includes examination of the financial condition, review of operations, preparation of audit program, audit working papers, and report upon examination of the client's business. The accountant's relationship with the client and the ethics of the profession are thoroughly discussed. A complete laboratory test is worked out to supplement the text study. Recent developments in audit procedure are included, systems in internal check analyzed, comparisons of balance sheets and detailed audits made. A background is developed in the theory of auditing in preparation for the C.P.A. examination.

A 41-42. Income Tax Procedure. Credit, 6 semester hours.

Prerequisite: A 21-22 recommended, A 11-12 required.

This course embraces a practical application of the principles of Federal Income Tax Law to concrete situations. The problems include the preparation of corporation, fiduciary, partnership, and individual tax returns; claims for refunds, credit, and abatement; records, reports, and requirements of Social Security and state and federal unemployment taxes; and the proper accounting procedure for tax records.

Business Administration

BA 21-22. Business Finance. Credit, 6 semester hours.

After a brief study of the various forms of business organization, the corporate form of organization is studied in greater detail. Classes of stocks and bonds and the rights of the holder are considered. Management and distribution of income are examined in detail with regard to surplus and dividend policies, reserves, depreciation, and financing of expansion. Stress is placed on the internal control of finances through budgets and organization as well as financing through banks and investment houses.

BA 31-32. Public Relations. Credit, 6 semester hours.

This course deals with the main principles of public relations, and how they are applied in specific cases. It shows how the practice of public relations is used by individuals, groups, companies and organizations to gain public understanding and acceptance, and to improve their relations with everyone in a position to affect their welfare. One of the course requirements is a paper evaluating a public relations program.

Business Law

L 11-12. Law of Contracts and Business Associations. Credit, 6 semester hours.

This course involves a study of basic principles of the law of contracts, agency, partnerships, limited partnerships, and corporations.

Contracts will involve a study of the formation of contracts, capacity of parties, offer and acceptance, performance, and discharge. Agency will deal with the appointment of agents, the relationship of principal and agent, power of the agent to bind his principal, duties of agent and principal to one another and to third parties.

Business associations will involve a study of the law relating to the formation and operation of the usual types of business organization. Also considered is the legal relationship among the individuals within the business organization as well as their relationship with third parties.

L 21. Law of Sales. Credit, 3 semester hours.

Prerequisite: L 11-12.

Offered in September of ODD years.

This course is an advanced study of Business Law comprising: bailments; duties and liabilities of bailees, common carriers, and warehousemen; the laws governing the rights of parties engaged in the transfer of personal property. Questions of title, risks assumed, rights of creditors, express and implied warranties, buyers' and sellers' remedies, together with the business background out of which such relations arise are also considered.

—Fall only.

L 22. Law of Commercial Paper and Bankruptcy. Credit, 3 semester hours.

Prerequisite: L 11-12.

Offered in February of EVEN years.

This course is a study of the Negotiable Instruments Law, dealing with negotiable promissory notes, bills of exchange and bank checks with an analysis of their form and function in commercial transactions. A brief survey of bankruptcy procedure under the federal bankruptcy laws is considered.

—Spring only.

Drawing and Design

D 11-12. Engineering Drawing. Credit, 6 semester hours.

(Offered also in Spring Semester on a two nights per week basis.)

This is an elementary course in engineering drawing designed to teach the use of instruments, the fundamental principles of projection, drafting room standards and conventions, lettering, selection and use of scales, orthographic projections, revolutions, developed surfaces, intersections and auxiliary views, and the making and dimensioning of complete working drawings of simple machine parts.

D 21. Introduction to Design. Credit, 3 semester hours.

Prerequisites: D 11-12, Ph 11.

This course is intended to introduce some elementary concepts of design in the engineering programs in order to develop an appreciation of design practice and to serve as a primer for advanced courses. It will cover elements of theoretical design and conventional design practice and fastenings such as threadings, riveting, et cetera.

—Fall only.

D 33-34. Elementary Machine Design. Credit, 6 semester hours.

Prerequisites: D 11-12, EM 27, and EM 28.

Offered in September of EVEN years.

The analysis and design of such elements as fastenings, bearings, gears, shafts, clutches, pulleys, and cams are discussed. Some machine parts are studied from the standpoint of kinematics, and their motions are analyzed.

D 35-36. Elementary Tool Design. Credit, 6 semester hours.

Prerequisites: D 11-12, EM 27 and EM 28.

Offered in September of ODD years.

The objective of this course is to present and develop the basic techniques of tool design through lectures, class discussions, and student design problems. Major topics considered are: methods analysis, drill jig design, tolerances and allowances, cutting tools, die design, gages and gaging policies, milling fixtures, turret lathe tooling, and cam design for automatic screw machines.

D 41-42. Advanced Machine Design. Credit, 6 semester hours.

Prerequisite: D 33-34.

Offered in September of ODD years.

The elements of machine design studied in the first year are unified in the complete design, individually selected and developed by the student. Advanced problems, such as balancing and critical speeds, are considered the latter part of the year.

D 45-46. Advanced Tool Design. Credit, 6 semester hours.

Prerequisite: D 35-36.

Offered in September of EVEN years.

This course will consider the interrelationship of tool design with the pertinent elements of tool engineering such as: planning, processing, estimating, and tooling costs. Student tool design work will be of a group nature entailing the complete planning and designing necessary to manufacture machine parts and die work. Major topics considered are: locating and clamping theory, tooling economics, tool estimating, and process planning.

Economics

Ec 33-34. Economics. Credit, 6 semester hours.

The course aims at an understanding of the principles, institutions, and practices which form the basis of our economic system and activity. Such aspects of our economy as production, price, exchange, and distribution will be considered. The course examines the basic economic aspects of capitalism and the other "isms". Opportunity is offered to the student to do independent work in the field of his own specialized interest.

Electricity

EE 22. Electrical Survey. Credit, 3 semester hours.

The course cannot be taken by electrical engineering students.

Prerequisites: M 13 (desirable, but not essential), Ph 12.

The fundamental concepts of electricity and magnetism and their application to electrical circuiting and electromagnetic devices are considered. Electrical measuring techniques and industrial applications of electrical machinery are also pointed out. Problems involving simple mathematics accompany such class assignments.

—Spring only.

EE 23-24. Electrical and Magnetic Circuits. Credit, 6 semester hours.

Prerequisites: M 13-14, Ph 11-12, M 21-22. (M 21-22 may be taken concurrently.)

This course consists of the fundamental concepts of electricity. It includes Ohm's law and Kirchoff's laws, a study of the properties of conductors and insulators, nonlinear resistance circuits, magnetic circuits and fields, induced and generated electromotive force, and the dielectric circuit. A brief survey is made of the a-c circuits, d-c and a-c machines and electronic tubes and circuits. Laboratory work is included.

EE 31-32. Alternating Current Circuits. Credit, 6 semester hours.

Prerequisites: EE 23-24, M 21-22.

Fundamental theory of single phase and polyphase alternating current circuits, instruments and measurements is considered. The concepts of vector algebra and Fourier analysis are applied to steady-state solutions of AC networks. Suitable laboratory work is included.

EE 35-36. Direct Current Machines. Credit, 6 semester hours.

Prerequisite: EE 23-24.

Offered in September of EVEN years.

This course includes a review of the fundamental laws of direct current circuits and magnetic circuits; mechanical construction of the d-c machine; magnetic circuits of d-c machines, flux leakage; leakage around windings embedded in slots; armature and field windings; electromotive and magnetomotive forces of the armature, armature reaction; commutation; generator and motor characteristics; stability of motors; special machines, such as 3-wire generator, arc-welding generator, diverterpole generator, dynamotor, rototrol generator, Rosenberg generator (amplidyne), multistage rototrol; losses and heating in d-c machines; starting of d-c motors (manual and automatic starters). Laboratory work is also included.

EE 37-38. Electric Power Transmission. Credit, 6 semester hours.

Prerequisite: EE 31-32.

Offered in September of EVEN years.

This course considers generating equipment, types and lay-outs of power plants, switch board lay-out, metering, switching and protective devices, types of transformers and transformer connections. It considers calculation of short circuit currents, transmission line calculations, mechanical considerations and system protection and distribution systems.

EE 41-42. Alternating Current Machines. Credit, 6 semester hours.

Prerequisites: EE 31-32, EE 35-36.

Offered in September of ODD years.

The basic theory of AC circuits and DC machines is combined with electromagnetics in a study of basic AC machinery. Single phase, poly-phase and auto transformers, poly-phase alternators and induction meters, poly-phase synchronous meters, paralleling alternatives, and single phase meters of various types are covered. Applications of the various devices are considered. Laboratory work in this equipment supplements the recitations.

EE 43-44. Elementary Electronics. Credit, 6 semester hours.

Prerequisites: EE 31-32 (may be taken concurrently).

This course includes a study of electron ballistics, thermionic emission, various tube types and characteristics, methods of analyzing vacuum tubes and vacuum tube circuits, analysis and design of small signal and large signal amplifier circuits, vacuum tube oscillators, modulation and detection, gas tubes, rectifiers and filters, basic pulse circuits, electron tube instruments, with emphasis on communications and industrial applications where possible.

EE 45-46. Communications Circuits. Credit, 6 semester hours.

Prerequisite: EE 31-32.

Offered in September of ODD years.

This course includes a study of 4 terminal networks, their reduction to T or pi structures, general network theorems, general transmission line theory, the theory of impedance matching devices and a study of the high frequency transmission line with emphasis on the use of charts in the solution of practical problems.

EE 47-48. Advanced Electronics. Credit, 6 semester hours.

Prerequisite: EE 43-44.

Offered in September of EVEN years.

This course includes a review of EE 43-44, which is largely concerned with the discussion of basic circuits making up more complex devices. A large part of the course is assigned to the analysis of apparatus used in practice, both in industry and communications. As time permits, high frequency systems and their operation will be considered in the second semester.

Engineering Mechanics

EM 23. Mechanical Processes. Credit, 3 semester hours.

This course is designed to acquaint the student with the basic metal cutting processes. Machining properties of metals are developed both with respect to single and multiple point metal cutting tools as well as the adaptability of standard and special machine tools employed by the metal industry. The lathe, milling machine, planer, shaper, saw and other allied machine tools where metal is removed by chip formation are specifically covered. Simultaneously, the selection and application of basic cutting tool materials is developed for each basic machine. The approach is planned to enable the engineer to choose or substitute several basic machine tools for specific applications.

—Fall only

EM 26. Engineering Materials. Credit, 3 semester hours.

A survey of the principal metals used as engineering materials with concentration on the properties and applications of ferrous alloys. Attention is directed to the production of these materials, methods of fabrication and typical properties of the finished product. Applications are studied with respect to the mechanical and the chemical approach so that substitutions can be made depending upon availability, preparation and economy. Purchasing specifications are developed to broaden the latitude of selection. In general, the avenue of approach is designed to assist engineers who must select metals and alloys for engineering use.

—Spring only

EM 27. Mechanics. Credit, 3 semester hours.

Prerequisites: M 13-14, Ph 11-12.

This course includes the theory and application of the principles of static equilibrium, stress in framed structures, friction, center of gravity, and moments of inertia.

—Fall only

EM 28. Strength of Materials. Credit, 3 semester hours.

Prerequisite: EM 27.

This course considers the theory of stress and resistance of materials; stress distribution and riveted joints, shafts, beams, and columns; and principal stresses.

—Spring only

EM 33. Mechanisms (Kinematics). Credit, 3 semester hours.

Prerequisites: D 11, EM 27, and M 21-22.

Offered in September of ODD years.

Linkages comprising mechanisms are studied as well as the graphical analysis of displacements, velocities and acceleration in mechanisms, including the use of instantaneous centers. Design of cams is considered, and an analysis is made of belt drives, gear profile action, and gear trains.

—Fall only

EM 34. Dynamics of Machinery, 3 semester hours.

Prerequisites: EM 27 and M 21-22.

Offered in February of EVEN years.

A study is made of the application of the principles of dynamics to the analysis of special topics in machines, such as the effect of inertia, flywheel design, balancing, governors, and gyroscopic effects. An introduction to vibration and critical speeds is presented.

—Spring only

English

E 1. Grammar Laboratory. Credit, 3 semester hours.

The objectives of this course are: first, to teach the student the fundamental principles upon which good English is based; second, to give him practical experience in the use of themes, recitations, note-books, and conferences; and to train him in the use of the dictionary. Special work is prescribed for those whose preparation is inadequate and for those who show need of review.

E, B. Reading Laboratory. One semester. No credit.

This course aims at helping the student to read faster and to increase comprehension. The objectives are more effective study habits, increased vocabulary, the enjoyment of reading and the development of independent thinking. The subject matter includes methods and mechanics of reading, use of the dictionary, values in words, patterns of writing, the outline, rationality of argument, propaganda, and literary values. The work of the course includes reading and exercises in the text, vocabulary exercises, supervised reading for speed, training films and discussion.

E 13. Writing Laboratory. Credit, 3 semester hours.

Prerequisite: Satisfactory performance on English Placement Examination, either at admission or at the completion of E2, Grammar Laboratory.

This laboratory course is designed primarily to help students learn to write by writing—to develop the ability to organize thoughts quickly and effectively, to write with speed and facility, and to use simple written English.

—Either Fall or Spring

E 14. Speaking Laboratory. Credit, 3 semester hours.

This course serves as an introduction to the principles of speech. The objectives are: to develop in the student proficiency in the use of vocal and bodily aids in various speaking situations, and to help the student gain confidence and fluency when speaking extemporaneously, as in group discussions, or in everyday conversation. Recordings are used for self-analysis and criticism.

—Either Fall or Spring

E 18. Modern Literature. Credit, 3 semester hours.

This is a course in the reading of approximately ten representative works of outstanding contemporary authors, chiefly American and English. The reading and classroom discussions will be supplemented by lectures designed to provide certain theories of criticism and the historical background. The goal is an understanding of the function of literature and of the artist in society.

—Spring only

E 19. Technical Report Writing. Credit, 3 semester hours.

Prerequisite: E 13

Included in this course of writing for the engineering, management and business student is the study and analysis of the professional scientific paper, the preparation of processes and reports on the technical and semi-technical level and an introduction to the principles of business letter writing.

Industrial Administration

IA 11-12. Industrial Organization and Management. Credit, 6 semester hours.

(Offered also in Spring Semester on a two-night per week basis.)

This is an introductory course in management. It introduces the student to all the major functions of industry, their interrelationship, and how they are brought together through *organization*. Thus the student receives instruction in the preliminaries of methods, cost, production control, product development, finance, physical facilities, quality control, plant engineering, industrial relations, job evaluation, sales, advertising, budgets, and records.

IA 14. Management Survey. Credit, 3 semester hours.

(Not open to management majors.)

This course introduces the engineering student to the major functions of industry and points up their interrelationship and how these functions are coordinated through organization.

—Spring only

IA 33. Cost Control. Credit, 3 semester hours.

A large percentage of the cost of a product is incurred by the supervisors and foremen through whose departments the product passes on its way from raw material to finished state. To control and reduce this cost is an important part of their job. Only if they understand all the factors comprising such costs can they accomplish this end. This course will familiarize them with the elements of cost necessary to control, stressing particularly the indirect or overhead elements—their measurement and control.

—Fall only

IA 34. Production Control. Credit, 3 semester hours.

The instruction stresses the basic principles that govern production control in an industrial plant. These principles are worked out in the problems of procuring and controlling materials, in routing, scheduling, and dispatching. The intent of the course is to familiarize the student with the use of the most up-to-date methods in this field, including visual control systems.

—Spring only

IA 35-36. Statistical Quality Control. Credit, 6 semester hours.

Following a selected study from elementary statistics, the use of statistics as a management tool is illustrated in class problems. Statistical quality control is taught to represent the most economical method of controlling the quality of a product or process since it does not use 100% inspection to weed out defective items already produced, but rather samples the process or service to eliminate the defects before they occur.

IA 41-42. Methods Engineering. Credit, 6 semester hours.

Instruction in methods of analyzing plant equipment, products, and operations is covered in this course. Process charts, flow charts, analysis sheets, preparation of summaries of operations, analyses of tools and requisite equipment, specifications for materials, the handling of materials in process, adapting plants to new products, the correlation of methods to safety and health requirements are some of the items considered. Time and motion study techniques are introduced in connection with many of these problems.

Industrial Safety

S 11-12. Industrial Safety, Elementary. Credit, 6 semester hours.

The approach to the subject of industrial safety is from an analytical and scientific viewpoint. It aims to give a foundation to the student upon which he can build a better knowledge of safety and accident prevention. Each student will be required to give at least two talks before the class on a relevant subject and present a written report of not less than one thousand words. Safety talks of this course will be recorded and played back to the class for criticism and suggestion in order to increase the individual's ability in safety presentation.

S 21-22. Industrial Safety, Advanced. Credit, 6 semester hours.

Prerequisite: S 11-12.

Offered in September of EVEN years.

The advanced course covers more specialized work. In addition to discussion of special hazards, including occupational diseases, it is expected that students will, during the course of instruction, be doing advanced work in speaking and writing on safety subjects. There will be some laboratory work in connection with this course. The use of field instruments required for occupational disease studies will be thoroughly covered. Demonstration of visual and sound technique in the preparation of safety education material is also provided. The emphasis throughout will be on creative work.

Mathematics

M 1-2. Basic Mathematics I. Credit, 6 semester hours.

Meets 2 nights a week per semester.

This course in mathematical methods represents the fundamental operations of algebra and the application of these operations to problems. Topics discussed include the theory of equations, factoring, and fractions. In geometry the concept of proof is emphasized and applied, and the properties of the triangle are considered.

—Either Fall or Spring

M 3-4. Basic Mathematics II. Credit, 6 semester hours.

Meets 2 nights a week per semester.

Prerequisite: M 1-2, or equivalent.

The study of algebra is continued in this course and includes the following subjects: the quadratic equation, ratio and proportion, variation, and the trigonometry of the right triangle. In geometry the circle is discussed and studied, and consideration is given to similar figures and areas.

—Either Fall or Spring

M 13. Trigonometry. Credit, 3 semester hours.

Prerequisites: M 3-4 or equivalent.

This course is devoted entirely to the study of trigonometry. The topics studied include trigonometric functions, fundamental relations, solutions of right and oblique triangles, trigonometric reductions, angular measure, graphs of the functions, composite angles, inverse functions and logarithms.

—Fall only

M 14. Algebra and Analytic Geometry. Credit, 3 semester hours.

Prerequisites: M 3-4 or equivalent.

The fundamental operations of algebra are thoroughly reviewed and various topics such as the function concept, variation, synthetic division, complex numbers are studied. Special emphasis is placed on the solution of word problems. The analytic geometry of the straight line, circle and parabola is studied in detail.

—Spring only

M 21-22. Differential and Integral Calculus. Credit, 6 semester hours.

Prerequisites: M 13, M 14.

In this course, the limit concept, the derivative and its applications to problems involving maxima and minima are carefully studied. The differentiation and integration of the power function are studied concurrently and are applied to problems in physics and science. These include areas, volumes of revolution, centroids and moments of inertia of plane and solids of revolution, and differentials. The differentiation and integration of the trigonometric exponential, and logarithmic functions are carefully studied. The functions are then applied to problems.

M 23. Applied Calculus. Credit, 3 semester hours.

Prerequisite: M 22.

This course provides an opportunity for those students who enjoy mathematics to follow through to completion many of the topics introduced in Differential and Integral Calculus and to study the applications of those topics. The course is further designed to provide a better mathematical background for the study of advanced engineering courses, especially in electrical engineering.

Metallurgy

Mt 21. Metallography. Credit, 3 semester hours.

In this course the relations between equilibrium diagrams, heat diagrams, structures, and physical properties of both ferrous and non-ferrous metals and alloys are stressed. Attention is given to pyrometric measurements, automatic temperature control apparatus, gas and electric heat-treating furnaces, and quenching methods and media, and preparation of metallurgical specimens for microscopic examination.

—Fall only

Mt 31-32. Non-ferrous Metallurgy. Credit, 6 semester hours.

Prerequisite: EM 26 or EM 28.

Offered in September of ODD years.

The physical metallurgy of aluminum, magnesium, copper, nickel, zinc, lead, tin and their alloys is covered by lecture, discussion and laboratory work. Melting, alloying, casting, extruding, rolling, drawing, and heat treatment of the metals are studied with emphasis on the efforts of variables and reasons therefor. Typical mill and service difficulties are analyzed in light of the specific fundamental principles involved.

Mt 41-42. Steels and Their Heat Treatment. Credit, 6 semester hours.

Prerequisites EM 26 or EM 28.

Offered in September of EVEN years.

The course covers the principal grades of carbon and alloy steels employed for press, structural, automotive, tool and die as well as stainless applications. Cast irons are also included as competitive material. The fundamentals such as the iron-carbon phase diagram, transformation diagrams, grain size and hardenability are studied. The lectures and discussions are supplemented by laboratory work where the student is trained to recognize typical microstructures of steel as affected by heat treatment.

Office Supervision and Management

OM 11-12. Office Organization and Management. Credit, 6 semester hours.

This course considers the profession of office supervision and management by a study of the qualifications, responsibilities, and functions of the office manager. It deals with the organization of an office with respect to its personnel, physical layout, and equipment. The various departments of an office, such as filing, stenographic, credit, are analyzed. The place and function of the office in the whole organization of the business is studied. Attention is given to costs and budgets.

Personnel Supervision

PS 22. Fundamentals of Supervision. Credit, 3 semester hours.

Prerequisites: IA 11, OM 11-12, or IA 14.

This course considers the problems faced by the supervisor in day-to-day relations with co-workers. While the problems at all levels are covered, emphasis is placed on those at the lower levels of supervision. By the conference technique, an application of the possible areas of conflict and what the individual supervisor can do to minimize such conflicts is developed. The course considers factors in the selection, development, and promotion of supervisors and outlines the qualifications of a good leader.

—Fall only

PS 23-24. Personnel Administration. Credit, 6 semester hours.

The aim of this course is to provide a foundation in fundamental concepts and a general knowledge of techniques in the administration of personnel relations.

The course covers such subjects as the principles of personal adjustment, the social organization of business, motivation and incentives, employee attitudes and morale. Such techniques of personnel administration as interviewing, job analysis, appraisal and placement, training, merit rating, employee relations, and wage administration are dealt with, not from the standpoint of training technicians in specific techniques, but to secure breadth and depth in the approach to personnel problems.

PS 43-44. Management-Labor Relations. Credit, 6 semester hours.

This course aims to present the problems involved in the relations of management and labor. It begins with a history of the labor movement, then considers the intervention of government in labor relations, and explains the legal framework within which plant practices evolve. The discussion of current practices in negotiation, in grievance handling, and in the settlement of disputes is designed to bring out a point of view which may contribute to a greater stability in relations. When possible, guest speakers contribute to the establishment of that point of view.

PS 42. Conference Leadership. Credit, 3 semester hours.

This course is designed to accomplish two main objectives: (1) study in the principles and problems peculiar to conducting business conferences, training conferences, or union-management discussion and (2) practice in conference leadership. Original and creative work is required in the subject matter of the practice conferences. The student may meet this requirement by the completion of a research project in some area of his previous study, or by submitting adequate conference plans based upon practical experience and research on his job.

—Spring only

Philosophy

Phil 11. Philosophy. Credit, 3 semester hours.

An introduction to reflective thinking on such central issues of human life as man's place in the universe, how we discover truth, the nature of beauty and the good, and the basis of moral choices. Ideas of a few major philosophers from Plato to Dewey will be presented. Stimulation of individual clear thinking upon life's most vital problems will be emphasized in discussion.

—Fall only

Phil 22. Ethics. Credit, 3 semester hours.

A constructive appraisal of the major ethical systems in the framework of the problems of contemporary society. Ethical norms which point to the goals and ends of life and their relation to the issues of science, business, the professions and other human activities are examined in problem studies.

—Spring only

Physics

Ph 11-12. Engineering Physics. Credit, 6 semester hours.

Prerequisite: M 3-4, or equivalent.

This is a basic course in physics for technical students with lectures and demonstrations. Attention is paid to the basic principles of physics including mechanics, motion, velocity, acceleration, electricity, heat. The course stresses use of the slide rule, applied mathematics and graphical methods of presentation and analysis. The course aims to develop the habit of using correct methods of thinking and analysis in the solution of engineering problems. Not a laboratory course.

Ph 32-33. Thermodynamics and Heat Power. Credit, 6 semester hours.

Prerequisites: Ph 11-12, M 21-22.

Offered in September of EVEN years.

This course begins with a study of thermodynamics which covers the first and second laws of thermodynamics and their applications to general type problems. With this ground-work established, the course proceeds to deal with the various industrial applications of this work such as: fans, blowers, pumps, flow systems, refrigeration, and air conditioning, and elements of steam power. A treatment of heat transfer concludes the course.

Psychology

P 21-22. Industrial Psychology, 6 semester hours.

Prerequisite: P 23-24.

Offered in September of ODD years.

This course is concerned with the applications of psychological principles and knowledge to industrial situations. Topics considered include the causes of behavior, attitudes, morale, measurements of proficiency, selection of employees, acquisition of skills, motivation and work, fatigue, accidents and physical environment.

P 23-24. General Psychology. Credit, 6 semester hours.

This course is designed to give the student a general knowledge of the important principles of human behavior. Topics included are: motivation, emotion, learning, personality, intelligence, etc. The utilization of psychological knowledge in relation to everyday human activities will be emphasized.

Sales and Marketing

SM 11-12. Principles of Selling. Credit, 6 semester hours.

This course presents definite techniques and basic principles of selling and how to get along with people. It includes the study of: prospect selection, knowledge of the product, pre-approach and approach, demonstration, meeting objections, close and departure. Desirable personality traits of the salesman are considered. Each student will have opportunities to demonstrate his ability to sell a given product by* means of a class demonstration.

Science

Sc 11-12. Modern Science. Credit, 6 semester hours.

A survey of the methods of science and the place of physical science in our modern world. The material covered is taken from astronomy, physics, chemistry and geology, with the emphasis on the unity of physical science as a field of knowledge. The aim of the course is to develop a scientific attitude of mind and to provide a summary for the student of man's knowledge about the world in which he lives.

Sociology

Soc 13-14. Modern Civilization. Credit, 6 semester hours.

The first semester is devoted to a survey of the field of sociology. During the second semester, the knowledge gained during the first semester is applied in analyses of problems of modern civilization.

**THE NEW HAVEN
YMCA JUNIOR COLLEGE**

***The Daytime
Cooperative Program***

*OFFERING THE DEGREE
ASSOCIATE IN SCIENCE*

NEW HAVEN COLLEGE, 1957-58

Calendar

THE DAYTIME COOPERATIVE PROGRAM 1957-1958

The Cooperative Program consists of alternate periods of study and work; therefore, the students are divided into two groups—Group A and Group B.

Group A

PERIOD 1—STUDY

1957

Last day of application	Aug. 9
Registration	Aug. 26
Tuition due	Aug. 26
Day classes begin	Aug. 26
Labor Day (holiday)	Sept. 2
*Evening classes begin	Sept. 26
Classes end	Oct. 18

PERIOD 2—COOPERATIVE WORK

Work period begins	Oct. 21
Work period ends	Dec. 24
Vacation	Dec. 25-Jan. 1, 1958

PERIOD 3—STUDY

1958

Tuition due	Jan. 2
Classes begin	Jan. 2
Classes end	Mar. 21

PERIOD 4—COOPERATIVE WORK

Work period begins	Mar. 24
Work period ends	Aug. 22

Group B

PERIOD 1—COOPERATIVE WORK

1957

Last day for application	Aug. 30
Registration	Sept. 9
Tuition due	Sept. 9
*Evening classes begin	Sept. 26

PERIOD 2—STUDY

Classes begin	Oct. 21
Thanksgiving (holiday)	Nov. 28-29
Classes end	Dec. 17
Vacation	Dec. 18-25

PERIOD 3—COOPERATIVE WORK

1958

Work period begins	Dec. 26, 1957
Work period ends	Mar. 21

PERIOD 4—STUDY

Tuition due	Mar. 24
Classes begin	Mar. 24
Good Friday (holiday)	April 4
Memorial Day (holiday)	May 30
Classes end	June 13

* See Evening Credit program calendar for complete evening calendar.

The Daytime Cooperative Program of New Haven Y.M.C.A. Junior College

Staff Member in Charge: C. L. ROBERTSON



Aims and Objectives

The College realizes that work experience is a part of the learning experience, and provides in its program an opportunity for the student to explore various job situations. When a student is put into a work situation, he gains learning there that will supplement and complement his classroom learning. There is also the maturing influence of the opportunity to work with working people. As yet, there is no classroom substitute for the practical knowledge derived from experiences of the day-to-day problems on the job. The experience gained from the cooperative jobs—doing different types of work and discovering the working conditions on these jobs—assists the student in choosing a field for his life's work.

Through the College's experience in coordinating the work and study of student-employees in its evening credit program, it recognizes the desirability of developing young men and women who will enter business or industry with more than narrow technical skills. Companies look for future leaders with a background broad enough to prepare them to cope with the increasingly complex economic and social problems of business today. The Cooperative Program of studies is designed to meet this need. Its curriculum provides subjects that develop the individual both intellectually and socially. It also provides the technical education necessary for entry jobs in business and industry.

The Cooperative Plan of the College recognizes the fact that many young men desire to spend their first two years of college at home and then go on to a senior college. Provision is made in the program for these students to gain fundamental preparation for later transfer to a senior college.

Schedule of Hours

Classes are held between the hours of 8:30 a.m. and 2 p.m., Monday through Friday.

Length of Program

It is a program offering alternate periods of study and work through two years. The operation of the Cooperative Plan provides that half of the student body is in college studying at one time while the other half is on a cooperative job in business or industry.

The year is divided into four periods. Periods One and Two, before Christmas, are each eight weeks in length. Periods Three and Four, between New Year's Day and the middle of June, are each twelve weeks in length. Half the student body studies in Periods One and Three and works in the other two periods. The other half of the student body studies in Periods Two and Four and works in the other two periods. The vacation periods are divided between the two groups.

The Study Period

During the study period classes are held in the buildings of the Sheffield Scientific School of Yale University, in the Prospect Street area. Physical Education and recreational activities are scheduled at the Y.M.C.A. In order to permit as much freedom as possible in planning their programs, students are permitted to select technical courses in the evening, from courses in business, engineering, and management. The evening subjects meet from 7:00 to 9:45 p.m. It should be noted that evening subjects, if elected, meet continuously from September through June regardless of whether the co-operative period is a study or a work period. During each study quarter, some academic work is assigned to be completed during the work period.

The Work Period

Before the beginning of the work period, each student consults with his college coordinator regarding his job assignment for the work period. (For further details see the section on coordination and job placement.) Once the job assignment is made, it is expected that the student will remain on the job throughout the whole work period. The college coordinator is available to discuss any questions or problems that arise on the job. The additional academic work assigned during the study period will be completed by the end of the work period.

Typical Cooperative Jobs — Listed below are a few typical jobs on which cooperative students might be placed:

Simple assembly operator	Office boy
Bookkeeping and accounting clerk	Sales clerk
Time-study clerk	File clerk
Expediter—"stockchaser"	Messenger
Draftsman	

Work Schedule — On the job, the work week will be determined by the individual company. Students are expected to conform to the same rules and regulations as the regular employees.

Cooperative Work Record — At the end of each work period the cooperating company furnishes a written evaluation of the student's performance on the job. This is used as an aid in future job placement and in counseling the student.

Location of Work — The majority of jobs are in the New Haven Area. However, in some cases, it is possible to arrange work in the student's own locality. Due to the extra planning involved, a student desiring to work near his home should submit his application as early as possible.

Earnings — The student receives the "going" rate of the job to which he is assigned. Although it is expected that earnings during the work periods should be more than sufficient to cover the tuition costs of the program, the applicant should be prepared to meet the initial costs. A conservative estimate of the average Co-op student's annual earnings would be between \$600 and \$800.

Admission Requirements

Because of the unique nature of the Cooperative Program, its admission requirements differ in certain respects from those of the Evening Credit Program. An applicant for the Cooperative Program

1. Must be a high school graduate or have earned a State High School Diploma;
2. Must not have attended full-time college for more than one year prior to applying for the Cooperative Program;
3. Must not have had more than two years of full-time work experience;
4. Must meet the standards of the College in respect to high school average;
5. Must meet the standards of the College in respect to admission examinations;
6. Must be physically fit for undertaking both employment and study.

The College prescribes no set pattern of high school subjects as entrance requirements.

An applicant for the Cooperative Program should be a graduate of a secondary school of approved standing and should present 15 acceptable units of secondary school work.

In general the applicant may be admitted on the basis of his secondary school record when it shows an average grade of "C" or better; when the secondary school subjects bear a reasonable relationship to the courses to be taken at the College (and when the applicant is recommended by his secondary school).

He is, in addition, required to take the examinations as described for Evening Credit students.

Application For Admission

Before making formal application for admission to the Cooperative Program, prospective students may obtain an interview with a member of the staff by writing or phoning the college office. Such an interview in no way commits the student nor does it constitute an application.

Formal application for admission to the Cooperative Program is made by requesting an *Application for the Cooperative Program*. Application for fall admission should be submitted by August 9. Registration in this program is limited; therefore, applications submitted after August 9 will be considered only if the quota has not already been filled.

An application fee of \$5.00 must accompany the application (see index heading *Tuition, Cooperative Program*).

Interview — The applicant may be requested to come to the College to be interviewed. The purpose of this interview is threefold:

1. To discuss the results of any examinations taken.
2. To outline tentatively the courses to be taken.
3. To discuss the employment aspect of the program.

Acceptance of Application — After the above procedures have been completed, each applicant is notified by letter of his acceptance or rejection. The applicant confirms his intention to undertake the program by returning to the College the *Acknowledgment of Acceptance Form*, and an acceptance fee of \$25.00. This fee is credited toward tuition charges for those who undertake the program. However, it is *not* refundable.

Registration — Applicants accepted are notified of their registration date. At registration, forms are completed, the balance of the tuition charges for one semester are paid, and the student is provided with a class schedule and book list.

Transfer of Credit

In order to meet the needs of students who wish to spend their first two years of college in their own community and then go on to a senior college, the curriculum of the Cooperative Program is designed to facilitate transfer of credit to a higher institution. Transfer of credit to another college, in accordance with the usual practice among institutions of higher learning, will be determined by the other college in terms of the achievement and promise of the individual seeking transfer. The institution to which transfer is being made will also evaluate the length and content of the courses in the Cooperative Program in relation to its specific requirements. The New Haven YMCA Junior College is accredited by the Connecticut State Department of Education and is a member of the New England Association of Colleges and Secondary Schools, the New England regional association, membership in which is the criterion for acceptance of academic credit in colleges throughout the nation.

Scholastic Regulations

Subject Load — The full program of studies for a cooperative student is 15 semester hours per semester (5 courses) plus Physical Education, Orientation and Coordination.

In order to be graduated within two years, it is necessary that the student carry a full program of courses for 15 semester hours of credit each semester and that students of Engineering satisfy by examination Mathematics 1-2, Mathematics 3-4 and English 1. Courses repeated as a consequence of withdrawing or failing extend to more than two years the period required to earn the degree. Courses required beyond the two years are charged for at the rates given in the table of tuition charges for the Evening Credit Program.

Other Scholastic Regulations — Other scholastic regulations for cooperative students are the same as those for the work-study students, as described under *Scholastic Regulations*—Evening Credit Program.

Requirements for the Degree

The Associate of Science degree is granted upon

1. Completion of the sixty to seventy-two semester hours of required study.
2. Completion of four work periods, and successful performance on cooperative job assignments.
3. Acquisition of a 2.0 average Quality Point Ratio.
4. Recommendation of the faculty.

(See page 19 for further details of graduation requirements.)

Advanced Standing

A student who wishes to enroll in the Cooperative Program with advanced standing by virtue of previous study in another program of this College or in some other accredited college must present his advanced credits for evaluation by the Committee on Academic Standing. The extent of advanced credit, as well as the sequence and outline of the required courses still to be taken, will be determined by the Committee. All students who receive advanced standing through transfer credit must complete at least thirty semester hours of study in the Cooperative Program.

Job Placement and Coordination

Once an applicant for the Cooperative Program is found to be acceptable under the standards of admission to college study, the College immediately begins preparation to place him in the business life of the community.

He is assigned to one of two groups of students who alternate quarterly in work and study. He agrees that once placed in a job, he will not leave the job on his own initiative nor attempt to change his employment status without consultation with his college coordinator. He receives the "going rate" of the job to which he is assigned. A student placed on a cooperative job may "earn his way," though that is not the primary objective of the program.

Placement is a learning process in itself. A job is a "privilege," not a "right." Most adults spend at least one-half of their waking hours in the job environment. The purpose of placement during college attendance is to relate study to such an environment. The applicant is assisted in placement, but he himself holds the key to success or failure. Employers will employ students to perform tasks for which they are qualified provided there are mutual advantages to be gained from such employment.

In his interviews with company coordinators representing prospective employers, the characteristics and qualifications of each student applicant

are in competition with those of another job applicant. Such things as personal appearance, cleanliness, grooming, habits of speech, and other personality traits and attitudes are considered along with previous education and the results of entrance tests.

The employer expects a college man in a cooperative program to do better than an average employee on an average job. He expects interest, enthusiasm, loyalty, intelligence, judgment and responsibility. He is looking for potentialities for permanent openings which may be available to those who have completed their programs and have received their degrees. Naturally, a student in the Cooperative Program should reciprocate the cooperation of the employer and display a willingness to learn in his dealings with all his associates in the work environment. It may be seen that the college cannot "guarantee" this enriched experience to every student, but it does guarantee its best efforts to make such experience possible.

The College screens all applicants in terms of employability as judged by recognized tests and by interviews based on industrial practice. It limits enrollment in the program. It conducts coordination meetings to facilitate adjustment to what employers expect. It tries to match the student's interest and abilities to the employer's requirements, and it works with company representatives and the student on the job to develop the most satisfactory cooperative relationship for all concerned.

It is inevitable, however, that, in certain cases, successful placement in satisfactory cooperative employment may be delayed by prevailing business conditions or for reasons peculiar to the individual case. In such a situation, the student may begin his study quarter without placement for the following work quarter; then if his work adjustment is still delayed, he continues his coordination meeting during the work quarter and completes his academic credit under the guidance of his college counselor. Should placement be unattainable for the second consecutive work period, the student may complete credit for a college year, but would then be advised to discontinue the Cooperative Program.

Each student placed in a cooperative job is closely supervised by a coordinator to whom he has been assigned. The coordinators visit employers regularly. Coordination meetings are held with groups of students at such intervals as the occasion demands. A student may seek a conference with his coordinator at any time, but to avoid job interruption he should make an appointment in advance for an evening hour during the work period.

Cooperative Work Reports — A beginner on any job is handicapped by a lack of knowledge of the work environment, of the essentials of the job, of the use of equipment, of what is expected of him by other personnel, and of methods of doing business. To learn of these things should be the first objective of a new employee. Students in the Cooperative Program when placed on new jobs will be expected to adjust as quickly as possible and to write a report of their observations. The student must remember, of course, that his primary obligation to his employer is the performance of those tasks for which he was hired, and most certainly the requirement of a report of the learning process does not call for delving into or reporting anything of a confidential nature concerning the employer's business.

Relations with Cooperating Companies

In general, students in the Cooperative Plan are treated by the employer as regular employees. They are expected to perform in their jobs as effectively as any regular employee in a beginning job. However, the cooperative plan student is not a permanent employee. The College's part in the relationship between student and cooperating company is

1. To screen all applicants and furnish those most nearly meeting the company's specifications,
2. To see that an alternating employee is available to the company when the student on the job returns to the College for his next study period,
3. To conduct coordination classes to facilitate the student's adjustment to what his employer expects,
4. To follow up with company representatives and the student on the job to develop the most satisfactory cooperative relations for the individual company and student.

In turn, the employer's part in the Cooperative Program is

1. To hire a cooperative student with the expectation of releasing him for the succeeding study period,
2. To request, if he desires, that the same student return for additional work periods, or that an employed student be replaced,
3. To consult with the college coordinator concerning any contemplated change in employment status,
4. To pay the regular rate of pay for the job,
5. To give the College an appraisal of the student's performance on the job.

Tuition and Fees

THE DAYTIME COOPERATIVE PROGRAM 1957-1958

Application Fee — The application fee is \$5.00, payable only once, at time of initial application, and is not refundable.

Acceptance Fee — The acceptance fee is \$25.00. It is payable when the applicant who has been accepted by the College acknowledges his acceptance and confirms his intention of undertaking the program. The fee is applied to tuition charges. It is not refundable.

Tuition — Tuition is \$460.00 a year, payable in two payments of \$230.00 each, as specified in the schedule below. The acceptance fees will be applied to the first tuition payment.

Schedule of Tuition Payment Dates

GROUP A:

\$230.00—August 26, 1957

\$230.00—January 2, 1958

GROUP B:

\$230.00—September 9, 1957

\$230.00—March 24, 1958

Student Activity Fee — The student activity fee of \$10.00 a year is included in the tuition charges.

Refunds — No refund of tuition payments will be made for withdrawal from either the work or study program, or for reductions in the study program.

Deferred Payments — In exceptional cases, arrangements for deferred payments may be made through the college office.

Additional Charges — Where permission is granted for additional courses, they will be charged at the rate of \$45.00 per course per semester.

Suggested Programs of Study



Since the aim of the Cooperative Program is to prepare students to live a rich and satisfying life, a major part of which involves earning a living, the studies are built around a group of basic daytime courses of a general education nature, combined with *evening* electives according to the individual's vocational interests. A student may elect to pursue introductory courses in Business, in Management, or in Engineering. In order to allow flexibility in scheduling the courses, each student's program will be worked out in conference with his college advisor.

In accumulating the sixty semester hours of credit necessary for a degree in the Cooperative Program, the student must take thirty-six semester hours of required daytime courses and elect twenty-four additional semester hours of credit.

These elective courses may be earned each year through one of two plans as outlined below:

- A. One additional daytime courses and one evening course each year, or
- B. Two evening courses each year.

I. Required Daytime Courses

The following courses are required of all Cooperative Students:

FIRST YEAR		SECOND YEAR	
E 14c	Speaking Laboratory (Fall) 2½ s.h.	E 19c	Technical Report Writing (Fall) 2½ s.h.
E 13c	Writing Laboratory (Spring) 3½ s.h.	E 25c	Literature (Spring) .. 3½ s.h.
P 13c-14c	General Psychology .. 6 s.h.	Ec 21c-22c	Economics 6 s.h.
Soc 15c-16c	Sociology 6 s.h.	Sc 21c-22c	Physical Science 6 s.h.
†IA 15c-16c	Coordination	†PE 21c-22c	Physical Education
†P 11c-12c	Orientation		
†PE 11c-12c	Physical Education		
†	Required non-credit courses.		

II. Optional Daytime Courses

FIRST YEAR		SECOND YEAR	
IA 13c-14c	Industrial Organization and Management 6 s.h.	Pol. Sc. 21c-22c	Political Science 6 s.h.

III. Elective Evening Courses

Those interested in Business are advised to choose a combination totaling 6 or 12 s.h. per year from among the following:

FIRST YEAR		SECOND YEAR	
A 11-12	Introductory Accounting 6 s.h.	Any courses listed in the first year and/or:	
BA 21-22	Business Finance 6 s.h.	*A 21-22	Intermediate Accounting 6 s.h.
BA 31-32	Public Relations 6 s.h.	*A 23-24	Cost Accounting 6 s.h.
L 11-12	Law of Contracts and Business Associations .. 6 s.h.	*A 41-42	Income Tax Procedure .. 6 s.h.
OM 11-12	Office Organization and Management 6 s.h.	*L 21	Law of Sales (Fall) 3 s.h.
SM 11-12	Principles of Selling 6 s.h.	*L 22	Law of Commercial Paper & Bankruptcy (Spring) 3 s.h.
		*PS 23-24	Personnel Administration 6 s.h.

* Requires prerequisite courses. See Course Descriptions for Evening Credit Program.

Those interested in *Management* are advised to choose a combination totaling 6 or 12 s.h. per year from among the following:

FIRST YEAR		SECOND YEAR	
IA 33	Cost Control (Fall)	3 s.h.	Any course listed in the first year and/or:
IA 34	Production Control		*S 21-22 Adv. Industrial Safety ..
	(Spring)	3 s.h.	*PS 23-24 Personnel Administra-
IA 35-36	Statistical Quality Con-		tion
	trol	6 s.h.	6 s.h.
IA 41-42	Methods Engineering	6 s.h.	
PS 22	Fundamentals of Super-		
	vision (Fall)	3 s.h.	
S 11-12	Industrial Safety	6 s.h.	
PS 43-44	Mgt.-Labor Relations	6 s.h.	
PS 42	Conf. Leadership (Spring)	3 s.h.	

* Requires prerequisite courses. See Course Descriptions for Evening Credit Program.

Those interested in *Engineering* are advised to choose a combination totaling 6 or 12 s.h. per year among the following:

FIRST YEAR		SECOND YEAR	
D 11-12	Engineering Drawing	6 s.h.	Any courses listed in the first year and/or:
EM 23	Mechanical Processes		**D 21 Introduction to Design
	(Fall)	3 s.h.	(Fall)
EM 26	Engineering Materials		**EE 22 Electrical Survey
	(Spring)	3 s.h.	(Spring)
*M 1-2	Basic Math. I (Fall)	6 s.h.	**EE 23-24 Electrical and Magnetic
*M 3-4	Basic Math. II (Spring)	6 s.h.	Circuits
*M 13	Trigonometry (Fall)	3 s.h.	**EM 27 Mechanics (Fall)
*M 14	Algebra and Analytic		**EM 28 Strength of Materials
	Geometry (Spring)	3 s.h.	(Spring)
**Ph 11-12	Engineering Physics	6 s.h.	**M 21-22 Diff. and Integ. Cal-
			culus
			**Mt 31-32 Non-Ferrous Metallurgy
			**Mt 41-42 Steels and Heat Treat-
			ment

* Placement examination determines in which level the student may be placed. Graduation requirements are increased by 6 s.h. if student is required to take M 3-4, and by 12 s.h. if he is required to take both M 1-2 and M 3-4.

** Requires prerequisite courses. See Course Descriptions for Evening Credit Program.

Descriptions of Courses

in

THE DAYTIME COOPERATIVE PROGRAM OF THE JUNIOR COLLEGE

E. 13C. Writing Laboratory. Credit, 3½ semester hours.

This course is designed primarily to help students learn to write by writing—to develop the ability to organize thoughts quickly and effectively, to write with speed and facility, and to use simple written English. The course provides practice in applying these principles to the writing of letters, memos, reports, job descriptions, and other business papers.

Prerequisite: E 1 or satisfactory performance on English Placement Examination.

—Spring

E 14C. Speaking Laboratory. Credit, 2½ semester hours.

This course serves as an introduction to the principles of speech. The objectives are: to develop in the student proficiency in the use of vocal and bodily aids in various speaking situations, and to help the student gain confidence and fluency when speaking extemporaneously, as in group discussions, or in everyday conversation. Recordings are used for self-analysis and criticism.

—Fall

E 19C. Technical Report Writing. Credit, 2½ semester hours.

Prerequisite: E 13C.

Included in this course of writing is the study and analysis of professional scientific papers, the preparation of processes and reports on the technical and semi-technical level, and an introduction to the principles of business letter writing.

—Fall

E 25C. Literature. Credit, 3½ semester hours.

Four principal literary types—short story, novel, drama, and poetry are studied. The emphasis of the course is upon understanding literature as a means of expressing and interpreting human experience. The works studied are drawn largely from the nineteenth and twentieth centuries.

—Spring

Ec 21C-22C. Economics. Credit, 5 semester hours.

The course aims at an understanding of the principles, institutions, and practices which form the basis of our economic system and activity. Such aspects of our economy as production, price, exchange, and distribution are considered. The course examines the basic economic aspects of capitalism and the other “isms.” Opportunity is offered for the student to do independent work in the field of his own specialized interest.

NOTE: Ec 21C carries 2½ semester hours; Ec 22C carries 3½ semester hours.

IA 13C-14C. Industrial Organization and Management. Credit, 6 semester hours.

This is a fundamental course dealing with the history of business and industry; an appreciation of the functions and responsibility of business enterprise; some understanding of the variety of activities which go to make up our complete business system; the problems of men, materials and machines that are involved in the making and distribution of the product. The intent is to provide an understanding of our highly complex industrial and business organizations and how they fit into our economic activity.

NOTE: IA 13C carries 2½ semester hours; IA 14C carries 3½ semester hours.

IA 15C-16C. Coordination. No credit. 1 hour per week. First Year.

This is intended to assist the Cooperative student in his adjustment to the various situations that he will meet on his job during the work period. It discusses the oppor-

tunities that exist in the various fields; things to look for while on the job; relations with supervisors and other employees and what the employer expects of the Cooperative student. These topics are covered during the study period through group meetings and individual conference with the instructor. However, coordination is continued during the work period by conferences with the College coordinator while the student is on the job.

Satisfactory completion is required for graduation.

P 11C-12C. Orientation. No credit. 1 hour per week. First year.

This is essentially a group guidance activity through which students are assisted in 1) making the most satisfactory adjustment to college life and study, and 2) establishing intelligent long-range vocational goals for themselves.

The first part of the course is concerned with establishing the meaning and purpose of the college program, with study techniques, and with getting along with others. Later the student sees his abilities, aptitudes, interests and personality characteristics; studies occupational fields, and is assisted in using this information to arrive at realistic and intelligent goals for himself.

Satisfactory completion is required for graduation.

P 13C-14C. Psychology. Credit, 6 semester hours.

This course is designed to give the student a general knowledge of the important principles of human behavior. Topics included are: motivation, emotion, learning, personality, intelligence, etc. The utilization of psychological knowledge in relation to every day human activities is emphasized.

NOTE: P 13C carries 2½ semester hours; P 14C carries 3½ semester hours.

PE 11C-12C. Physical Education. No credit. 2 hours per week.

Varied physical training and recreational program including activities in the gym and swimming pool are provided including: games for fun and skill; training for the improvement of leisure sports; exercise; acquaintance with various sports and games requiring some proficiency. Satisfactory completion of this program is required for graduation.

PE 21C-22C. Second year—Same as above.

Satisfactory completion is required for graduation.

Pol Sc. 21C-22C. Political Science. Credit, 6 semester hours.

This course deals with the structure and functions of the national government, party organization, national and state relations, and American politics as compared to other countries and the trends in modern politics.

NOTE: Pol Sc. 21C carries 2½ semester hours; Pol Sc. 22C carries 3½ semester hours.

Sc 21C-22C. Physical Science. Credit, 6 semester hours.

A survey of the methods of science and the place of physical science in our modern world. The material covered is taken from astronomy, physics, chemistry and geology, with the emphasis on the unity of physical science as a field of knowledge. The aim of the course is to develop a scientific attitude of mind and to provide a summary for the student of man's knowledge about the world in which he lives.

NOTE: Sc 21C carries 2½ semester hours; Sc 22C carries 3½ semester hours.

Soc 15C-16C. Sociology. Credit, 6 semester hours.

The aim of this course is to provide the student with an understanding and appreciation of the major institutions which form the structure of American society and their interaction upon each other. Particular attention is devoted to the impact of the dominant institution—our industrial capitalistic economy—upon all other aspects of our life—family structure, political organization, religion, etc. During the second semester opportunity is given to the student to explore in greater detail some phase of the subject which is of particular interest to him.

NOTE: Soc 15C carries 2½ semester hours; Soc 16C carries 3½ semester hours.

Course descriptions of elective courses in Engineering, Business Administration and Industrial Management will be found in section entitled "Description of Courses" in the Evening Credit Program section.

THE DIVISION

of

SPECIAL STUDIES

NEW HAVEN COLLEGE, 1957-58

The Division of Special Studies

Staff Member in Charge: VIRGINIA M. PARKER



Aims

The special courses are designed to provide non-credit studies of general interest to adults of the community and to meet specific training needs of industrial personnel. Because these courses have arisen to fill needs in the New Haven area, it is anticipated that new courses will be added to the series as the needs are recognized and as the course materials are developed.

Schedule of Hours

All classes meet from 7:15 p.m. to 9:30 p.m., and each course meets one night per week unless otherwise noted. Courses vary in length from six sessions to seventeen sessions. A complete schedule is issued in August and January.

Admission Requirements

For certain courses the only requirement for admission is the interest of the applicant. For other courses, the applicant's present position and experience are the primary factors considered in admission. In the latter case, admission is completed by joint consultation between the College and the company.

Interested persons should request special bulletins which the College issues for individual courses in this division.

Application

The application card "Application for Admission to Special Courses" should be received by the College at least one week before the beginning date of the applicant's class.

Although courses are offered, registrations may sometimes be insufficient to justify a class section. In such cases, registrations may be held until such time as sufficient enrollment warrants giving the course, or full refund of any payments will be made upon request.

Certificate Requirements

Certificates are given at the successful completion of each course upon request of the student. Successful completion means at least three-fourths attendance in all classes, active class participation, and verification by the instructor. All courses are non-credit unless credit is specifically indicated in the course description.

COURSES OF STUDY

The following are typical of the types of courses offered in the Division of Special Studies. Descriptive sheets on each course giving price, length of course, and other pertinent information will be mailed upon request.

Applied Powder Metallurgy

The object of this course is to familiarize Production and Design Engineering personnel with the application of Powder Metallurgy as a production process. It is an eight session course covering the various phases of engineering, tooling, processing and controls used in the manufacture of powder metal structural parts and bearings. The course is designed primarily for foremen, supervisors and staff management persons interested in knowing more about this field. Classes meet for eight two-hour sessions, once a week.

Controls for Small Plants

The course explores the need for controls and the necessary records in companies varying in size from less than 50 employees to 250 employees. It also examines at what stages verbal and mental information becomes inadequate and records are necessary. No attempt is made to develop any particular system or record form. The course will cover sales control, production control, inventory control, purchasing, and cost control.

Cost Reduction Techniques

This course is designed to show the necessity within the industrial enterprise for creating an organized cost reduction program. It deals with all phases and areas of cost reduction, particularly the techniques employed to stimulate cost saving ideas and the development and installation of the cost saving procedure. As supplemental material, records of several actual case histories are used. The course is designed to help members of the management team interested in reducing costs and with specific intent to help plant managers, superintendents, division heads, general foremen, and foremen. This class meets for eight two-hour sessions, once a week.

Creative Thinking

This is a course designed (1) to make the individual aware of the importance of creative effort, (2) to demonstrate through discussion and participation just how each individual is capable of producing more and better ideas for solving personal and business problems, (3) to create an atmosphere conducive to the acceptance and development of creative ideas. The course content includes such topics as: the importance of creativity, ways to develop creativity, deterrents to creativity, processes of ideation, stimulants to creative thought, and brainstorming. Following brief and informal presentations by the instructor, all students are encouraged and guided into discussion techniques, brainstorming, and self-interrogation. Course consists of six weekly sessions of two hours duration each.

Descriptive Geometry

This course is offered to train draftsmen or those with adequate drafting background in the principles of descriptive geometry and their applications in the design and layout of industrial products. The course covers the representation of objects by means of a system of related views with graphical methods of determination of true shapes of lines and planes and the clearances or true angles between them; piercing point and perpendicular relationships; intersections and developments of plane and curved surfaces.

Electroplating

This is a sixty-week series in electroplating, divided into four fifteen-week courses. The student may make arrangements to attend the entire sixty-week series or any one of the four fifteen-week courses. The third course, Electroplating Solutions, assumes a knowledge of chemistry at least equal to that presented in the second course, Chemistry for Electroplating.

The four courses presented are as follows:

1. Electroplating Fundamentals
2. Chemistry for Electroplating
3. Electroplating Solutions
4. Electroplating Practice

Employment Interviewing

The course covers the role and technique of the interviewer from the basic interview to actual hiring. Topics include requisites of the successful interviewer, the unique value of the interview in the employment process, objectives of interviewing, pitfalls of interviewing, physical setting for the interview, organization of the employment department, practices used, sources of recruitment, the application form final interview, interviewing aids, role-playing interviews by class and discussion thereof, exit interview, state and federal labor laws pertaining to employment.

Engineering Development Seminar

A series of bi-weekly seminars permit plant managers, chief and assistant chief engineers, department heads and others to study, observe and discuss current technological developments and usages in Connecticut industry by means of plant visits and seminars.

The following procedure is followed at each seminar: (1) Assemble at the plant for lunch, (2) Briefing concerning general nature of company by top management, (3) Briefing concerning the process to be observed by chief engineer or other technical officer, (4) Observation of the process, (5) Discussion of the process, (6) Preview of the next seminar. Each seminar consists of persons of similar jobs and backgrounds, and each company is represented by a primary registrant who may bring one person to each seminar. Registration is limited to fifteen companies or thirty individuals.

Engineering Drawing, Basic

The course is designed for the apprentice draftsman and trainee and assumes no prior knowledge of drawing. The work is designed to teach the use of instruments, the fundamental principles of projection, drafting room standards and conventions, lettering, selection and use of scales, orthographic projections, revolutions, developed surfaces, intersections and auxiliary views, and the making and dimensioning of complete working drawings of simple machine parts.

Graphic Arts and Design

This course is designed for industrial editors, advertising personnel, printing designers, printing craftsmen and others concerned with the design of printed material.

Classes are held in the graphic arts laboratory on the ground floor of the Yale Art Gallery in the School of Architecture and Design.

Emphasis of the course is placed on good design—how to express type and photographic material in the most effective and attractive manner. However, other subjects related to graphic arts will be examined including paper, color, control of printing costs, when to use what process, styles of type, and fitting copy into fixed spaces.

The “case method” of teaching is used in this course. Students face such problems as designing the cover and inside pages of a brochure, laying out a newspaper advertisement with copy supplied, designing a letterhead, fitting type within fixed spaces, and preparing both type and photographic layouts. Each of the problems in the twelve-session course has been designed to illustrate basic graphic arts principles.

Students, using copy and photographic material, work out solutions to problems in class after which the instructor summarizes design and graphic arts principles, using class work for illustrations.

Methods-Time Measurements

The course aim is to acquaint the student with the basic principles of this tool of work measurement and methods analysis and to promote skill for practical application of those principles. The course discusses the origin of the method, its principal uses and its limitations. The analysis procedure is considered together with the use of the methods-time data tables. The basic motions are discussed in chronological order. Emphasis is placed on the predominant purpose of each motion and the difference in the various cases and types of each, with demonstrations and motion pictures to illustrate the starting and stopping points of the basic motion. An explanation of the principle of limiting motions is given, and the group practices recording simultaneous motions of the arms, hands, and other parts of the body. Approximately half the sessions are devoted to learning to observe the fundamental motions. Then the method is applied to selected assemblies brought in by the students. The fifteen-week session closes with a discussion and demonstration of how time standards can be set or estimated from drawings and samples.

Production Control

The following series of production control courses has been developed to train all levels of employees. Basic Production Control is designed for the trainee and low-level production control employee and as an appreciation course for foremen and supervisors. Advanced Production Control covers intensively major problems involved in all phases of production control and is intended exclusively for persons engaged in production control work or who are preparing to enter production control. Control Systems Analysis is intended for those who have been working in production control for some time and affords the opportunity of analysing five typical systems in operation.

Basic Production Control

Presents important elements of production control such as introduction, planning, materials handling, routing, scheduling, dispatching and follow-up. Material covers the overall functions of production control and their relationships.

Advanced Production Control

Part I pursues intensively major problems involved in production planning, routing, scheduling, and machine loading. Part II pursues intensively major problems involved in dispatching and follow-up.

Control Systems Analysis

This course assumes a comprehensive knowledge of the principles of production control and comprises an analysis of actual systems in operation. The course alternates with five plant visits and class discussions thereof. The plants visited may vary but they are chosen with the view of furnishing the participant a good cross-section of types of production control systems in operation in New Haven and vicinity.

Professional Engineers Examination Refresher

Intended to be a refresher course with the primary purpose of preparing for the ENGINEERING FUNDAMENTALS section of the Professional Engineers examination. Use of past examinations and the working of problems therein is a major part of the instruction. Admission is open to those who wish to take the Professional Engineers Examination and believe themselves qualified.

Servomechanisms

Two special courses in the field of servomechanisms have been developed. Servomechanisms I and II deals with the theory; Servomechanisms Components I and II considers the various components.

Servomechanisms (Theory)

The course starts with a review of the applicable theoretical background. The analysis of electric and mechanical systems is simplified by the introduction of the LaPlace transform method. The analysis of the system from the stability point of view is considered. The Nyquist

criteria and the criteria of Routh, Hurwitz, and Leonhard are studied. The problem of synthesis of an equalizing network for the system which will allow it to meet given accuracy and stability specifications are considered in detail. Both series and minor loop techniques are considered. Load disturbances and noise problems are covered. The course concludes with advanced topics as time permits. Admission presupposes at least one year of successful study in an accredited college, including college-level physics and mathematics through differential and integral calculus.

There are two fifteen-week sections in this course, Servomechanisms I and II. Entrance to Servomechanisms II may be gained only after taking Servomechanisms I or after discussion with the instructor indicates that the person's work experience and general background qualify him for admission.

Servomechanisms Components

The object of this course is to establish the transfer function for the elements and establish the characteristics important in control system design. The course will consider the various components used in control systems from the system point of view considering the electric, mechanical pneumatic and hydraulic elements. Admission presupposes that the applicant has taken the prerequisite course in Servomechanisms Theory, such as Servomechanisms I; otherwise permission of the instructor is required.

There are two fifteen-week sections in this course, Servomechanisms Components I and II.

Shop Mathematics

Three special courses in shop mathematics are offered covering the essentials of algebra, geometry, and trigonometry as applied to shop problems as follows:

Shop Math I—Basic Shop Mathematics

Review of fundamental operations, use of formulas, instruction and practice in the use of the slide rule, geometry, and introduction to trigonometry.

Shop Math II—Intermediate Shop Mathematics

Topics include positive and negative numbers, additions, subtractions, multiplication, and division of algebraic expressions, special products and factoring, fraction, elementary work with powers and roots. The solution of linear equations, and work with formulas and literal equations are included. The basic geometric constructions and the necessary theorems and formulas from plane geometry are discussed without formal proofs.

Shop Math III—Advanced Shop Mathematics

After a short study of trigonometry, this course is devoted to the solving of more complex shop problems. Problems are adapted from engineering and trade journals and from various handbooks. Students are encouraged to present problems from actual experience.

Speed Reading

The course uses special techniques and equipment to improve reading speed and comprehension, to help adjust reading to differing conditions and purposes, to develop skill in reading technical and business material, and to help the individual read with more comfort and satisfaction. The following are included: (1) Preliminary testing of eye movement, reading speed and comprehension to determine personal reading habits; (2) training on tachistoscope to increase width of eye span and speed of perception; (3) silent reading exercises with comprehension tests; (4) training in skimming; (5) use of Harvard films to maintain reading rate and to prevent needless regression; (6) final testing of eye movements, reading speed and comprehension. The course is open to all interested persons.

Supervision

Three special courses in supervision have been developed in recognition of the growing complexities of present-day supervision and are designed for two primary purposes:

1. To aid the new supervisor in adjusting to his new role.
2. To improve the supervisor's ability to get things done through people.

Supervision IA and IB are companion courses in the basic principles of human relations and leadership and the application of these principles to specific cases. Supervision IIA grew out of the recognition of the need for better informed supervisors in the area of labor legislation.

Supervision IA—Relations Between Supervisor and Employees

This is an introductory course in the basic principles of human relations and deals with such topics as: What human relations is, current human relations of problems and how they come about, cause-result approach to behavior, the individual and the group, reactions to frustration and the blocking of motives. Types, functions, and principles of interviewing are included.

Supervision IB—Situations in Human Relations

Building on the principles of Supervision IA, this course focuses upon the *application* of the basic principles of human relations to common, everyday situations encountered on the job. Through practice in the analysis of typical situations, participants get an orderly approach to the solution of human relations problems.

Supervision IIA—The Supervisor in Labor Relations

This course is designed to give the supervisor the important parts of the various laws with which he should be familiar, including such topics as the important points in federal and state laws regarding wages, hours, working conditions, workmen's compensation, social security, and handling grievances. Knowledge of this legislation is essential to the supervisor's performance.

Time Study

This series of time study courses is designed as a training aid to the time study department in the basic training of new men, and to present the material so that students will be productive in the time study department sooner.

Time Study I—Making the Time Study. Introduction to time study, making the stop watch study, element breakdown, continuous and snap back studies, non-cyclical elements, foreign elements, summarizing studies, slide rule practice, pro-rating time values, what to include in the cycle time and what to include as an allowance, the effect of allowances on the cycle time, how the calculations are made.

Time Study II—Leveling or Performance Rating. Introduction to leveling, common types of rating scales, factory operations brought to class, time studies rated, results checked against actual cycle time. Four practice sessions.

Time Study III—Down Time Study and Group Study. General approach to down time studies, activity of man and machine charts, introduction to ratio delay time study, analysis and discussion of man-machine studies brought in by class, case examples of group time study, analysis and discussion of group time study brought in by class.

Time Study IV—Methods. Introduction to flow process chart, introduction to principles of motion economy and work place layout, problems in work place lay-out brought in by students, introduction to right and left hand charts, practice in time study comparison of variations of assembly operation methods, micromotion study.

Traffic Management, General Freight. A course for the training of traffic managers offered in three parts, each seventeen weeks in length. Emphasis is placed on the use of actual tariffs in class activity. Course may be taken in one, two, or three parts at the discretion of the student. Part I includes introduction, bills of lading, claims, classification of freight less carload rules, carload rules, Rule 10, etc., miscellaneous rules, motor classification and rules, freight tariffs, commodity rates, exception to official classification, routing and tracing, weights and weighing, commodity rates to Central Freight Association territory, exceptions to motor classifications, rates — southern points. Parts II and III include thirty-three additional topics, a specific list of which will be furnished upon request. Course offered in conjunction with the Traffic Managers Institute of New York City. Part I is prerequisite to Parts II and III except by permission of instructor to persons in the traffic field.

Traffic, Motor Freight. A comprehensive course giving actual training in motor carrier traffic management fundamentals, including detailed study of motor carrier rates, classifications and tariffs together with rate-making procedures. Emphasis is on tariffs used by the motor carrier industry in New England. It is preferable that those interested in Motor Freight Traffic be

engaged in transportation while taking the course. Course offered in two 17-week parts with Part I a prerequisite to Part II except by permission of instructor to persons with suitable traffic experience.

Creative Writing Workshop. A seminar for students who are interested in improving their style of writing, whether they are beginners or professionals, by a study of techniques and methods and by self-criticism. Students may submit material in any form—short story, essay, poetry, drama, biography—to be read to the class and criticized by both class and instructor. Special projects in creative writing may also be carried out by individual students with the instructor's approval. The standard aimed at is professional. Open to all interested persons.

DIVISION OF SPECIAL STUDIES

Faculty, 1956-57

- BANKS, J. RICHARD *Creative Writing Workshop*
Columbia University
Associate Director, Yale University News Bureau
- BERNSTEIN, RALPH H. *Professional Engineers Examination Refresher Course*
B.E., Yale University; Registered Professional Engineer
Maintenance Manager, New Haven Board and Carton Company
- BOOTH, C. E. *Professional Engineers Examination Refresher Course*
Ph.B., Yale University
Registered Professional Engineer; Consultant, Westcott & Mapes, Inc.
- CHIRGWIN, ROBERT H., JR. *Methods-Time Measurement*
Junior College of Commerce
Manager of Industrial Engineering, Greist Manufacturing Company
- CHRISTIAN, RENA G. *Speed Reading*
B.A., M.A., University of Wisconsin; Kings College, London
- CRISCUOLO, MICHAEL *Cost Reduction Techniques*
New Haven College *Time Study*
Cost and Production Control Manager, The A. C. Gilbert Company
- CROKER, WILLIAM F., SR. *Motor Freight Traffic*
University of Chicago; Hillyer College
Assistant Traffic Manager, The Adley Express Company
- DREW, LOUIS E. *General Freight Traffic*
A.B., Columbia University; New York University
Traffic Managers Institute, Inc., New York
Assistant Traffic Manager, McKesson & Robbins Company, Bridgeport
- EARLY, ANN MARIE *Speed Reading*
A.B., Clark University; A.M.T., Radcliffe College
- FOLEY, EDWARD F., JR. *Electroplating*
B.S., Columbia University
Research Chemist, Enthone, Inc.
- GHOREYEB, JOHN W. *Employment Interviewing*
B.A., Yale University; M.A., Columbia University
Employee Relations, The United Illuminating Company

- GIBSON, JOHN E. *Servomechanisms*
B.S. in E.E., University of Rhode Island
M.C. in E.E., Ph.D., Yale University
Assistant Professor of Electrical Engineering, Yale University
- GILLIES, R. J. D. *Introduction to Operations Research*
Case Institute of Technology
Superintendent, Quality Control Engineering, Olin Mathieson Chemical Corp.
- GOEKLER, FRANK J. *Supervision*
C.E., Rensselaer Polytechnic Institute
District Equipment Superintendent, The Southern New England Telephone Co.
- GRIFFITH, MAXWELL *Production Control*
Ph.B., Yale University
Training Director, Dictaphone Corporation, Bridgeport
- HORTON, BRADFORD *Applied Powder Metallurgy*
Staff Engineer, Pitney Bowes, Inc., Stamford
- PEARSON, CLIFFORD *General Freight Traffic*
B.S., University of Bridgeport
Traffic Manager, Bridgeport Brass Company, Bridgeport
- SHEWBRIDGE, WILLIAM H. *Time Study*
B.S., Massachusetts Institute of Technology
Chief Time Study Engineer, Scovill Manufacturing Company, Waterbury
- THOMSON, DOUGLAS *Creative Thinking*
A.B., Dartmouth College; MCS, Amos Tuck School, Dartmouth College
Supervisor of Employment and Training, United States Rubber Company, Naugatuck Footwear Division, Naugatuck
- WIEDENMANN, HANS *Supervision*
Training Supervisor, The Southern New England Telephone Company
- WOERHEIDE, ARTHUR W. *Production Control*
LLB, Washington University
Production Control Manager, Winchester-Western Division, New Haven and East Alton, Olin Mathieson Chemical Corporation

THE SCHOOL

of

EXECUTIVE DEVELOPMENT

NEW HAVEN COLLEGE, 1957-58

The School of Executive Development

Staff Member in Charge: LAWRENCE C. PARKER



The School of Executive Development is a four-year training program to supplement the work experience of eligible managerial employees and to develop skills essential to executive action in firms of the New Haven area.

Origin and Purpose

The School of Executive Development at New Haven College originated in company requests, received over a period of several years, for a program of management studies for junior and middle level executives. With valuable assistance from educators and industrialists of Worcester, Mass., where a similar program has operated successfully at Worcester Polytechnic Institute, the College developed suggested instructional materials for a four-year program. This material was discussed with an advisory committee of industrial training directors and at a meeting of 34 executives. Both groups expressed a need for the program, and the first class of 25 was started in January, 1953. Since that date, more than 175 men from over 40 companies have been admitted to the program which has been enthusiastically received by business and industry in Central Connecticut.

This program brings together, for management studies under capable leadership, men from various companies and institutions who have positions between the levels of departmental foremen and top management, or men who are next in line and are being prepared for departmental responsibility. These are in such departments as production, cost control, quality control, sales, methods, purchasing, industrial relations, engineering and accounting. The men, through working together, learn from each other and are stimulated to keep on learning. From their studies they are able to obtain meaning which was impossible for them to recognize in earlier schooling. Furthermore, previous learning is refreshed at a time when the men are ready to use it.

Schedule of Hours

Classes are scheduled one day a week from 4:00 to 6:00 p.m.

Classes meet from September to May with customary school holidays observed.

Admission Requirements

Prospective enrollees in the program are nominated by the company and are admitted following approval by the College.

Membership is limited to 28 in each year's class. To be eligible to participate, a person must satisfy the following conditions:

1. He must be a mature individual with experience in business or industry appropriate to the aims of the program.

2. His level of employment should be assistant department head or higher.
3. He must be nominated by his company, approved by the College, and show evidence of a desire to participate.
4. He must show a likelihood of completing the four-year program.
5. His job schedule must permit regular attendance.

One to four participants from a company may be enrolled in any one beginning class, which then meets on the regular schedule over the four-year period.

Organization of the Program

The executive development program is guided by a 14-man advisory committee of executives from New Haven area business and industry. This committee reviews all development work and assists in the general operation of the School.

Each class in the School elects its own steering committee to represent the participants in assisting the college with evaluation of content and procedures and in the organization of social activities and special projects.

Tuition

The annual charge is \$175.00 per man per year except for companies which have formal training agreements with the College, in which case the tuition is \$125.00 per man per year. This fee includes tuition, books and supplies and all other course expense.

Application

Preference for enrollment in a new class is given to companies currently participating providing that reservations are known to the College by mid-April, with final applications submitted not later than mid-May.

Applications from new companies must be submitted by mid-May and will be considered in order of application as the class quota permits.

Courses of Study

FIRST YEAR

Effective Self-Expression is a course in speech, conference training, and committee participation. It is speech studied in terms of expressing oneself in everyday situations to meet ordinary business needs.

Speed Reading improves reading speed and comprehension, helps adjust reading to differing conditions and purposes, and develops skill in reading technical and business material.

SECOND YEAR

Human Relations in Industry affords an examination of a series of inter-personal situations to bring out the factors involved, and to illustrate effective techniques which were, or might have been, utilized in each case.

Economics is a study of several of the pressing national and international problems facing our economy, such as rapid growth, inflation, taxes, national debt, rearmament, the inter-nation challenge of socialism and communism, and aid to other countries.

THIRD YEAR

Economics of the Firm examines the problems of the firm and the national economy and studies the functions of management, the corporate structure, types of business, organization, and such problems as the use of patents, the relation of the firm to the community, and certain effects of government regulations.

Production Management traces the problem from product design, plant layout, and work flow to methods improvement, and finally to scheduling and control.

Buying and Selling Practices provides an insight into the marketing and procurement problems of the firm as they relate to production.

FOURTH YEAR

Personnel Administration affords an opportunity to study problems of manpower management, including federal and state regulation of employment practices, medical and personal services, and the implications of a contractual relationship with the workers.

Report and Policy Formation examines problems of policy writing and affords the student a review of the materials studied throughout the entire program.

SCHOOL OF EXECUTIVE DEVELOPMENT

Faculty, 1956-1957

- BAUER, ELEANOR HARVEY *Effective Self-Expression*
B.L.I., Emerson College; M.A., New York University
Speech and Hearing Consultant, New Haven Public Schools
- BROEKHUYSEN, EGBERT *Production Management*
M.E. and E.E., Technical College of Amsterdam
Plant Manager, Micromatic Hone Corporation
- CHRISTIAN, RENA G. *Speed Reading*
B.A. and M.A., University of Wisconsin; Kings College, London
- EKHOLM, C. RAY *Report and Policy Formation*
B.S. in Engr., University of Wisconsin
Management Consultant, Ekholm Associates, New Haven
- FADUM, HANS *Economics of the Firm*
B.S., University of Illinois; M.A. and Ph.D., Yale University
Assistant Treasurer, United Illuminating Company
- GIBBS, RICHARD *Buying and Selling Practices*
B.S., Haverford College
Vice President and General Manager, United Advertising Corp.
- GUEST, ROBERT H. *Human Relations*
M.A., Columbia University
Associate Director of Research, Institute of Human Relations, Yale University
- MARTIN, EVERETT W. *Effective Self-Expression*
B.S., Harvard University
Director of Educational Projects, Liberty Mutual Insurance Company
- MURPHY, JOHN J. *Economics*
M.A., Yale University
Instructor of Economics, Yale University
- PLUMLEY, FRANK *Buying and Selling Practices*
B.S. in C.E., Massachusetts Institute of Technology
Purchasing Agent, New Haven, Olin Mathieson Chemical Corp.
- RODDY, FRANK M. *Personnel Administration*
B.A., Boston College
Labor Supervisor, The American Brass Company, Ansonia Branch

School of Executive Development Advisory Committee

HAROLD F. KNEEN, *Chairman*, President, Safety Industries, Inc.

FREDERICK T. BACKSTROM, President, First Federal Savings and Loan Association of New Haven

EDWIN E. CASPELL, General Superintendent, New Haven and Trenton Works, American Steel and Wire Division of the United States Steel Corporation

WILLIAM J. COOPER, Executive Vice President, The United Illuminating Company

JOHN A. DICKIE, Manager of Engineering, MB Manufacturing Company, a Division of Textron, Inc.

A. C. GILBERT, JR., President, The A. C. Gilbert Company

H. M. GREIST, Vice President and Factory Manager, The Greist Manufacturing Company

W. M. HURLEY, Vice President and General Manager, Winchester-Western Division, Olin Mathieson Chemical Corporation

GEN MASTROGIOVANNI, Training Director, B. F. Goodrich Corporation, Sponge Products Division

ELLIS C. MAXCY, Executive Vice President, The Southern New England Telephone Company

JOSEPH S. MILLER, President, The New Haven Board and Carton Company

P. B. WATSON, Works Manager—Wallingford Plant, Plastics and Resins Division, American Cyanamid Company

WILLIAM B. WILLIAMS, Secretary and Treasurer, Acme Wire Company, New Haven

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